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BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB.

EDITED BY

N. B. KINNEAR.

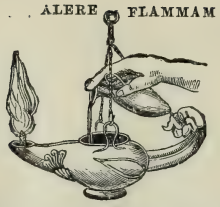
VOLUME XLIX.

SESSION 1928–1929.

LONDON:

WITHERBY & CO., 326 HIGH HOLBORN.

1929.



PRINTED BY TAYLOR AND FRANCIS,
RED LION COURT, FLEET STREET.

PREFACE.

During the past Session the number of attendances at the meetings of the Club was 322 members and 82 guests, a total of 404, a considerable decrease from the previous year.

During the Session two addresses were delivered, one by Professor Arthur Thomson, Professor of Anatomy at Oxford, on "The Pecten of a Bird's Eye," and the other by Dr. H. Manson Bahr on "Ornithology as an Aid to Medical Science." Both were copiously illustrated with lantern-slides and were much appreciated by all members present.

The Club is again greatly indebted to Lord Rothschild for two remarkable exhibits from his collection at Tring. The first consisted of a series of abnormally pigmented birds of buff or brown colour, and the second of 103 skins of hybrid ducks. This last exhibit was supplemented by a number of specimens from the British Museum collection.

At various meetings during the Session, Messrs. Bannerman, Bates, Delacour, Mathews, Meinertzhagen, Rothschild, Sclater, Stuart Baker, Ticehurst, and Whistler contributed notes of nomenclatorial interest or described new species.

In regard to the last, the numbers of birds which are new to science appear to be coming exhausted, and it now behoves ornithologists to devote themselves to other spheres of work, as suggested in the Chairman's address.

The final meeting of the Session was devoted to an exhibition of lantern-slides of Australian birds by Mr. C. Coles, R.A.O.U.

It is with a deep sense of personal loss we have to record the death of three members of the Club, Mrs. Meinertzhagen —formerly Miss Annie Jackson,—Sir Frederick Jackson, and Mr. H. C. Robinson.

The former was one of the honorary lady members of the B. O. U., and joined the Club in 1921. She had made a special study of the Charadriidæ, and was a recognised authority on the moults of the Anatidæ. Of recent years she frequently attended the meetings of the Club, and her cheerful disposition will be greatly missed by her many friends.

Sir Frederick Jackson served most of his life in British East Africa and Uganda, and was well known as a sportman. He was also very interested in birds, and at the time of his death was engaged in writing a work entitled 'The Complete History of the Birds of East Africa and Uganda.'

Mr. H. C. Robinson was for many years in charge of the Federated Malay States Museums, from which post he had only just retired. Since then he had been a regular attendant at our meetings.

Through his early training in the Derby Museum, Liverpool, Mr. Robinson had gained an extraordinary wide knowledge of ornithology, which he was always ready to place at the disposal of others. He had made a special study of birds of the Oriental region, and was writing a book on the Birds of the Malay Peninsula—two volumes of which had already appeared. His name will always be connected with the ornithology of that region, and only those who had the privilege of knowing him intimately can realise the very great loss our science has sustained by his untimely death.

N. B. KINNEAR,
Editor.

London, July 1929.

BRITISH ORNITHOLOGISTS' CLUB.

(Founded October 5, 1892.)

TITLE AND OBJECTS.

The objects of the Club, which shall be called the "British Ornithologists' Club," are the promotion of social intercourse between Members of the British Ornithologists' Union and to facilitate the publication of scientific information connected with ornithology.

RULES.

(*As amended, May* 9, 1928.)

Management.

I. The affairs of the Club shall be managed by a Committee, to consist of a Chairman, who shall be elected for three years, at the end of which period he shall not be eligible for re-election for the next term; an Editor of the 'Bulletin,' who shall be elected for five years, at the end of which period he shall not be eligible for re-election for the next term; a Secretary and Treasurer, who shall be elected for a term of one year, but shall be eligible for re-election. There shall be in addition four other Members, the senior of whom shall retire each year, and another Member be elected in his place; every third year the two senior Members shall retire and two other Members be elected in their place. Officers and Members of the Committee shall be elected by the Members of the Club at a General Meeting, and the names of such Officers and Members of Committee nominated by the Committee for the ensuing year, shall be circulated with the notice convening the General Meeting, at least two weeks before the Meeting. Should any Member wish to propose another candidate, the nomination of such, signed by at least two Members, must reach the Secretary at least one clear week before the Annual General Meeting.

II. Any Member desiring to make a complaint of the manner in which the affairs of the Club are conducted, must communicate in writing with the Chairman, who will, if he deem fit, call a Committee Meeting to deal with the matter.

III. If the conduct of any Member shall be deemed by the Committee to be prejudicial to the interests of the Club, he may be requested by the Committee to withdraw from the Club. In the case of refusal, his name may be removed from the list of Members at a General Meeting, provided that, in the notice calling the Meeting, intimation of the proposed resolution to remove his name shall have been given, and that a majority of the Members voting at such Meeting record their votes for his removal.

A Member whose name has been removed shall forfeit all privileges of Membership and shall have no claim on the Club from the date of his removal.

Subscriptions.

IV. Any Member of the British Ornithologists' Union may become a Member of the Club on payment to the Treasurer of an entrance-fee of one pound and a subscription of one guinea for the current Session. On Membership of the Union ceasing, Membership of the Club also ceases.

Any Member who has not paid his subscription before the last Meeting of the Session, shall cease, *ipso facto*, to be a Member of the Club, but may be reinstated on payment of arrears.

Meetings.

V. The Club will meet, as a rule, on the second Wednesday in every month, from October to June inclusive, at such hour and place as may be arranged by the Committee, but should such Wednesday happen to be Ash Wednesday, the Meeting will take place on the Wednesday following. At these Meetings papers upon ornithological subjects will be read, specimens exhibited and described, and discussion invited.

VI. A General Meeting of the Club shall be held on the day of the October Meeting of each Session and the Treasurer shall present thereat the Balance-sheet and Report; and the election of Officers and Committee, in so far as their election is required, shall be held at such Meeting.

VII. A Special General Meeting may be called at the instance of the Committee, for any purpose which they deem to be of sufficient importance, or at the instance of not fewer than fifteen Members. Notice of not less than two weeks shall be given of every General and Special General Meeting.

Introduction of Visitors.

VIII. Members may introduce visitors at any ordinary Meeting of the Club, but the same guest shall not be eligible to attend on more than three occasions during the Session. No former Member, who has been removed for non-payment of subscription, or for any other cause, shall be allowed to attend as a guest.

'Bulletin' of the Club.

IX. An Abstract of the Proceedings of the Club shall be printed as soon as possible after each Meeting, under the title of the 'Bulletin of the British Ornithologists' Club' and shall be distributed gratis to every Member who has paid his subscription.

Contributors are entitled to six free copies of the 'Bulletin,' but if they desire to exercise this privilege, they must give notice to the Editor when their manuscript is handed in. Members purchasing extra copies of the 'Bulletin' are entitled to a rebate of 25 per cent. on the published price, but not more than two copies can be sold to any Member unless ordered before printing.

Descriptions of new species may be published in the 'Bulletin,' although such were not communicated at the Meeting of the Club. This shall be done at the discretion of the Editor and so long as the publication of the 'Bulletin' is not unduly delayed thereby.

Any person speaking at a Meeting of the Club shall be allowed subsequently—subject to the discretion of the Editor—to amplify his remarks in the 'Bulletin,' but no fresh matter shall be incorporated with such remarks.

X. No communication, the whole or any important part of which has already been published elsewhere, shall be eligible for publication in the 'Bulletin,' except at the discretion of the Editor; and no communication made to the Club may be subsequently published elsewhere without the written sanction of the Editor.

Alteration and Repeal of Rules.

XI. Any suggested alteration or repeal of a standing rule shall be submitted to Members to be voted upon at a General Meeting convened for that purpose.

COMMITTEE, 1928–1929.

Dr. P. R. Lowe, *Chairman.* Elected 1927.
N. B. Kinnear, *Editor of the 'Bulletin.'* Elected 1925.
Dr. G. Carmichael Low, *Hon. Secretary and Treasurer.* Elected 1923.
Major Stanley S. Flower. Elected 1926.
A. L. Butler. Elected 1927.
T. H. Newman. Elected 1927.
B. W. Tucker. Elected 1928.

Officers of the British Ornithologists' Club, Past and Present.

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P. L. Sclater, F.R.S.	1892–1913.
Lord Rothschild, F.R.S.	1913–1918.
W. L. Sclater.	1918–1924.
H. F. Witherby.	1924–1927.
Dr. P. R. Lowe.	1927–

Editors.

R. Bowdler Sharpe.	1892–1904.
W. R. Ogilvie-Grant.	1904–1914.
D. A. Bannerman.	1914–1915.
D. Seth-Smith.	1915–1920.
Dr. P. R. Lowe.	1920–1925.
N. B. Kinnear.	1925–

Honorary Secretaries and Treasurers.

Howard Saunders.	1892–1899.
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H. F. Witherby.	1904–1914.
Dr. P. R. Lowe.	1914–1915.
C. G. Talbot-Ponsonby.	1915–1918.
D. A. Bannerman.	1918–1919.
Dr. Philip Gosse.	1919–1920.
J. L. Bonhote.	1920–1922
C. W. Mackworth-Praed.	1922–1923
Dr. G. Carmichael Low.	1923–

LIST OF MEMBERS.

JUNE 1929.

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165 Whitley, H.; Primley, Paignton, S. Devon.

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Witherington, G.; Sumner Plat, Hayward's Heath.

Wood, Dr. Casey A., M.D.; c/o The Library of Ornithology, McGill University, Montreal, Canada.

C. R. Wood; c/o Messrs. Martins Ltd. (marked "Personal"), 54 Sussex Place, South Kensington, S.W. 7.

Workman, William Hughes, F.Z.S.; Lismore, Windsor, Belfast.

175 Worms, Charles de; Milton Park, Egham, Surrey.

New Members for the Session .. 8
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NOTICE.

[Members are specially requested to keep the Hon. Secretary informed of any changes in their addresses, and Members residing abroad should give early notification of coming home on leave.]

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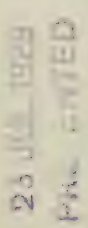

Bird Room

BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB.

No. CCCXXVI.

The three-hundred-and-twenty-first Meeting of the Club was held at Pagani's Restaurant, 42–48 Great Portland Street, W. 1, on Wednesday, October 10, 1928.

Chairman: Dr. P. R. Lowe.

Members present:—E. C. Stuart Baker; D. A. Bannerman; F. J. F. Barrington; Miss M. G. S. Best; P. F. Bunyard; A. L. Butler; N. Coltart; Sir Percy Cox; A. H. Evans; Miss J. M. Ferrier; Major S. S. Flower; Dr. E. Hartert; R. E. Heath; E. Hopkinson; Rev. F. C. R. Jourdain; N. B. Kinnear (*Editor*); Dr. G. Carmichael Low (*Hon. Sec. & Treas.*); N. S. Lucas; C. W. Mackworth-Praed; Lt.-Col. H. A. F. Magrath; Dr. P. H. Manson-Bahr; G. M. Mathews; Dr. W. N. May; T. H. Newman; C. Oldham; Lord Rothschild; D. Seth-Smith; W. L. Sclater; Major A. G. L. Sladen; Marquis of Tavistock; A. Landsborough Thomson; H. M. Wallis; H. Whistler; H. F. Witherby; W. H. Workman.

Guests present:—E. Bidwell; M. Schönwetter; J. P. Watson.

ANNUAL GENERAL MEETING.

This was held at Pagani's Restaurant, Great Portland Street, before the Dinner. The Minutes of the previous General Meeting were read and confirmed. Dr. G. Carmichael Low, the Treasurer, then presented the Annual Financial Statement of the Club. He said that the funds

of the Club were still prospering and the balance in hand at the moment was £519 5*s*. 10*d*. : of this £473 17*s*. 3*d*. were on deposit account, the bank interest for the last year on this sum being £9 12*s*. 10*d*. The statement had already been printed and circulated. The meeting unanimously passed it.

Dr. G. Carmichael Low then read his annual report. He said that the following members had resigned :—C. E. Baker, Dr. J. O. Beven, R. E. Coles, A. D. Sapsworth, Dr. G. M. Vevers, and R. O. Wynne ; while the following had been removed from the list of members under Rule IV. :— Count A. Bobrinskow, R. J. Fromols-Rakowsky, and S. H. Hart. He regretted to announce that the following members had died :—Major W. B. Arundel, Mrs. Meinertzhagen, R. Nesham, and J. Wilkinson. 10 new members had joined the Club during the year, and the total number now stood at 176.

The year was eventful in that the Rules of the Club had been revised and recast. This had been done by a sub-committee appointed by the Committee. It consisted of : Dr. P. R. Lowe, *Chairman of the Club* ; Mr. N. B. Kinnear, *Editor* ; Dr. G. Carmichael Low, *Hon. Sec. & Treasurer* ; Major S. S. Flower, *Committee* ; Rev. F. C. R. Jourdain, Mr. Charles Oldham, and Major A. G. L. Sladen. The new draft was brought up for approval at a Special General Meeting of the Club held on Wednesday, May 9, 1928, and was duly passed.

The Annual Dinner, held in conjunction with the British Ornithologists' Union in March, was again a great success.

No more had been done in respect of getting a room for the Club, but, as the funds were now in such a good condition, the possibility of this should be borne in mind.

Dr. G. Carmichael Low was re-elected Secretary and Treasurer. Dr. P. R. Lowe proposed, and Mr. H. F. Witherby seconded, a vote of thanks to the Secretary for the work he had done for the Club during the past five years.

Mr. W. B. Tucker was elected a member of the Committee in place of Mr. G. M. Mathews, retiring through seniority.

The Meeting then adjourned to Dinner.

BRITISH ORNITHOLOGISTS' CLUB.

Twelve months' Financial Statement, 1st September, 1927, to 31st August, 1928.

	£ s. d.	£ s. d.		£ s. d.	£ s. d.
To Balance in Hand, 1st September, 1927:—			By Printing and Distribution of Publications and 'Bulletin'		130 6 1
Cash at Bank, Current a/c .	79 8 2		„ Hire of Lanterns for Annual Dinner with B. O. U., etc.		7 7 0
do. Deposit a/c...	364 4 5		„ Thomas Wells for compiling and arranging Index to 'Bulletin' B. O. C. xlviii. 1927–28		5 5 0
In Hands of Treasurer	3 14 1		„ Dinner to Delegates of the International Conference on the Protection of Migratory Wild Fowl.		6 2 0
		447 6 8	„ Contribution to Zoological Society Record		11 5 0
„ Entrance Fees of 10 New Subscribers.....	10 0 0		„ Miscellaneous Expenses, including Audit Fee, Printing, Stationery and Postages		15 10 8
„ Subscriptions—177 Members	183 15 0				
		193 15 0	Total Payments		175 15 9
„ Sales of 'Bulletin'		44 7 1			
„ Bank Interest		9 12 10	„ Balance in Hand, 31st August, 1928:—		
„ Sundry Receipts		—	Cash at Bank, Current a/c ...	41 9 8	
			do. Deposit a/c.....	473 17 3	
			In Hands of Treasurer	3 18 11	
					519 5 10
		£695 1 7			£695 1 7

G. CARMICHAEL LOW, *Treasurer.*

We have compared the foregoing Statement with the books and vouchers of the British Ornithologists' Club for the year ended 31 August, 1928, and certify same to be in accordance therewith. We have also verified the Cash at Bank.

23 Queen Victoria Street,
London, E.C. 4.
18th September, 1928.

W. B. KEEN & CO.,
Chartered Accountants.

Committee, 1928–1929.

Dr. P. R. Lowe, *Chairman* (elected 1927).
N. B. Kinnear, *Editor* (elected 1925).
Dr. G. Carmichael Low, *Hon. Sec. & Treasurer* (elected 1923).
Major S. S. Flower (elected 1926).
A. L. Butler (elected 1927).
T. H. Newman (elected 1927).
B. W. Tucker (elected 1928).

Lord Rothschild, F.R.S., exhibited a curious pale variety of the Kestrel (*Falco tinnunculus tinnunculus*) and a series of varieties of other birds exhibiting a similar character.

He said that in all these birds the abnormal coloration was due to the suppression of the melanin in the pigmentary matter. The only partial exception appeared to be the variety of *Alectoris rufa rufa*, where the buff coloration due to absence of melanin was supplemented by the addition of evident misplacement of pigment; for, mixed with the buff feathering of the back are feathers coloured exactly like and with the same pattern as the flank-feathers characteristic of normal *Alectoris*. The melanin pigment, which is wanting in so much of the back and wings, also appears to have concentrated on the head.

Rook (*Corvus frugilegus frugilegus* Linn.).

One : dark brown, paler on back, non-moulted quills and rectrices faded, almost whitish. Utrecht in Holland.

One in first year's plumage. Light coffee-brown all over. Bought from Brazenor Bros.

One : light coffee-brown, upperside largely whitish cream-colour. Dublin, July 1887.

Magpie (*Pica pica pica* Linn.).

One : from an old case, no history. The usually black parts coffee-brown ("café-au-lait").

One : black portions of body-plumage pale russet-brown, back palest, wings and tail creamy-whitish, from Holland. The bill in both these brown.

Kashmir Magpie (*Pica pica bactriana* Bonap.).

♂ ad. Brown, breast and abdomen white, head and hind neck pale brown, exposed parts of quills, tail, and lesser upper wing-coverts silvery creamy-white, scapulars snow-white. Bill brown. South of Issik-Kul, Turkestan, December 1901. Rückbeil coll.

Starling (*Sturnus vulgaris vulgaris* Linn.).

Pale, more or less brownish variety. Canterbury district, Kent. Presented by R. Kerr.

♀. Pale brownish, back partially whitish, quills and tail-feathers white. Aylesbury, 23.i.1901.

Linnet (*Carduelis cannabina cannabina* Linn.).

♂. Brown variety. Rottingdean, 26.10.1902. Ex Brazenor Bros.

Sparrow (*Passer domesticus* (Linn.)).

Three females: almost exactly alike, above brownish-buff, tips of wings and tail whitish, underside buffy-white. One, Leigh, Reigate, 10.xi.1896; one, Coledean, Sussex, November; one, Prato, near Florence, i.xi.1903.

Chaffinch (*Fringilla cœlebs cœlebs* Linn.).

Three females: all similar, brownish-buff, quills and tails white or whitish, underside paler, rump and some edges to quills greenish-yellow. One from an old collection, no history; one, Renthendorf, 1.x.1844, collected by C. L. Brehm; one Buckland Common, near Tring, 1.xii.1921.

Brazilian Blue Grosbeak (*Cyanocompsa cyanea cyanea* (Linn.)).

♀. Brazil. The cinnamon-brown above and below replaced by a much lighter rufous-cinnamon, quills and tail-feathers whitish, the latter with faint brown bars.

Crested Lark (*Galerida cristata cristata* (Linn.)).

♀ ad. Upperside rufous-buff, spots on crop similar. Somewhat resembling certain desert-haunting forms. Pomerania, 25.xii.1878.

Sky-Lark (*Alauda arvensis* Linn.).

Two specimens, almost exactly alike, similar to the Pomeranian Crested Lark, but more reddish; one from Spain, 12.xi.1904; the other from Brighton, November 1889.

Blackbird (*Turdus merula merula* Linn.).

♀, first autumn. Upperside clayey-rufous, tips of wings lighter, underside lighter, chest more rufous, abdomen palest. Orltal, near Renthendorf, 10.ix.1811. C. L. Brehm coll.

Song-Thrush (*Turdus philomelos*) (probably *clarkei* Hartert).

Upperside and spots on underside rufous-buff. Isle of Man.

Redwing (*Turdus musicus* Linn.).

Similar variety, but red patch on sides of breast of the usual colour. Ireland.

Mistle-Thrush (*Turdus viscivorus viscivorus* Linn.).

♂. Upperside white, in middle of back brown tinge. Underside whitish, on breast and abdomen some buffy-rufous markings, sides rusty-buff with rufous cross-bars. Godalming, Surrey, 24.x.1903. "A. F." Ex Brazenor Bros.

American Robin (*Turdus migratorius* Linn.).

Upperside whitish-buff, tips of wings white. Chest, abdomen, and under wing-coverts bright rufous with some whitish edges to the feathers.

Robin (*Erithacus rubecula melophilus* Hart.).

Upperside creamy-buff, abdomen white, throat and jugulum hardly lighter than usual. From an old mounted collection, locality unknown.

Kestrel (*Falco tinnunculus tinnunculus* Linn.).

This female Kestrel has lost all the black colour, all the black bars on the upperside and tail being replaced by white ones,

the ground-colour of the upperside is a bright tawny ochraceous, instead of the usual vinous-chestnut; the quills greyish-buff with ochraceous-red bars, outer webs and tips whitish. Underside rich cream-colour, the blackish markings indicated by reddish shades. The bill appears to be less bluish, more brownish.

Pratincole (*Glareola pratincola pratincola* Linn.).

Upperside cream-colour, darker, rufous-clay borders to edges of scapulars and wing-coverts, upper tail-coverts white. Underside pale cream-colour, pale clay-coloured spots forming a semicircle around the throat, middle of abdomen white. Sarepta on the Volga.

Snipe (*Capella gallinago* Linn.).

Two bought at Leadenhall Market, London, with the upperside reddish-brown with cream-coloured and buff edges to the feathers, underside buff with faint cross-markings, abdomen white.

Another from the same source, with some deep black spots all over the upperside, otherwise like the other two.

Pin-tailed Snipe (*Capella stenura* (Bonap.)).

Very much like the two British *C. gallinago* described above. Fokien, China, 21.viii.1912.

Woodcock (*Scolopax rusticola* Linn.).

Four rufous-buff varieties—one from Kidderminster and three bought in the London market. Two have the whole upperside rufous and buff, two others somewhat silvery-grey tips to the feathers, smaller and darker in one, larger and paler in the other.

New Zealand Pigeon (*Carpophaga novæ-seelandiæ novæ-seelandiæ* (Gmel.)).

Two skins with the upperside buffy-white, back and upper wing-coverts with chestnut edges to the feathers, underside white, throat and chest brownish-buff. New Zealand, from Sir Walter Buller.

Puffin (*Fratercula arctica grabæ* Brehm.)

White; hind neck, back, and upper wing-coverts partially brown; a brown shade across the throat. Færoë Islands.

Hazel-Hen (*Tetrastes bonasia bonasia* (Linn.)).

Four pale varieties, all from (eastern) Russia.

Red-legged Partridge (*Alectoris rufa rufa* (Linn.)).

A young bird from near Tewkesbury, Gloucestershire, has entire back, wing-coverts, tertiaries, and rump buff variegated with chestnut and black powdering; tail and interscapulum rufous; primaries sooty variegated with black.

To further illustrate this peculiar phase in the Red-legged Partridge, an adult and a still younger bird belonging to the British Museum were exhibited. The young bird resembles the above-described example, but has more buff on the primaries. The adult has an entirely black head, a grey unstriped hind neck and interscapulum, a chestnut back intermixed with feathers identical with normal flank-feathers; tertials and wing-coverts as in back, rest of wing like first young bird, tail deep chestnut.

Under surface in both young showing moult into normal adult coloration; in the adult the under surface is normal, except for a strong reduction of black spotting of the upper chest.

Some eight or ten of this variety have been shot during the last 12 or 15 years, all in Gloucestershire. A normal ♂ was exhibited for comparison.

Partridge (*Perdix perdix perdix* (Linn.)).

Two pale varieties, from old collections. British Isles.

One in moult, on the upperside the feathers of the first juvenile plumage unbarred buff, the adult ones just coming deep rufous-brown, upper tail-coverts suffused with red. Bought at Leadenhall Market, September 4th, 1893.

Russian Partridge (*Perdix perdix robusta* Hom.).

Pale buff variety, upperside with fine greyish freckling. Orenburg, Russia, December 1879. Ex Lorenz.

Quail (*Coturnix coturnix coturnix* (Linn.)).

One, Leadenhall Market, November 1904. Upperside very prettily buff, yellowish-cream, and greyish. Underside white, on throat pale grey markings, chest light orange-brown.

Azorean Quail (*Coturnix coturnix conturbans* Hart.).

One from San Miguel, Azores. Upperside of a delicate pale grey, with stripes and bars ; underside white with pale brownish-grey markings.

Lord Rothschild, F.R.S., also exhibited a mounted Great Auk (*Alca impennis* Linn.) and an egg, the property of Messrs. Rowland Ward, Ltd., 167 Piccadilly, W. 1. He said that both the bird and the egg were recorded in Symington Grieve's 'The Great Auk or Garefowl,' but had been lost sight of for many years. The first record of the bird we have was that it was sold in 1835 to the Mainz Museum, together with a second bird by G. A. Frank; but in 1860 he bought it back in exchange for an Indian Tapir. Frank then sold it in the same year (1860) to John Gould, who sold it to Mr. Rocke, apparently through Shaw of Shrewsbury.

The egg was purchased by Mr. Rocke in 1869 from a Mr. E. Burgh, in whose family it had been for upwards of 70 years; from its age this egg must have been of Newfoundland origin. Both the bird and the egg have been kept in Mr. Rocke's family at Clungunford, Shropshire, till the present year. The bird probably also is an interesting example, as Frank must have had it before 1835, so that it is most likely that it was one of the few examples extant of the Great Auks breeding on the Geirfugle Skaer (=Garefowl Skerry). Most of the Icelandic Great Auks we still have were obtained on the Isle of Elday, after Gaerfugle Skaer had been destroyed by earthquake, between 1830 and 1844.

Lord Rothschild described a new race of Cassowary, and exhibited drawings from life :—

Casuarius bicarunculatus intermedius, subsp. nov.

Adult somewhat intermediate between *C. bicarunculatus salvadorii* and *C. bicarunculatus bicarunculatus*. The wattles instead of being on the sides of the neck, as in *bicarunculatus*, are in front, but almost double as wide apart as in *salvadorii*, and end in a spatulate and more round appendage.

Type, an adult bird now living in the Zoological Gardens, London, in which there are, however, still the remains of the brown plumage on the lower rump. The sides of the neck are violet as in *Casuarius casuarius violicollis* of Trangan Island.

A second much younger bird, also in the Zoological Gardens, has almost entirely brown plumage and the wattles are much smaller and with much less spatulate ends. However, they are separated to the same extent as in the adult.

Hab. Probably the two larger islands between Kobroon and Trangan, Aru Islands.

Mr. W. L. Sclater exhibited on behalf of Capt. C. R. Pitman, a male Helmeted Guinea-Fowl, which was shot in a papyrus swamp at Luzira on the shores of Victoria Nyanza, a few miles distant from Kampala, Uganda, by Mr. C. W. Chorley, who has kindly presented the specimen to the British Museum (Natural History).

In forwarding the specimen, Capt. Pitman sent the following note :—

"The nearest possible habitat of any species of Helmeted Guinea-Fowl in Uganda is apparently the west shores of Victoria Nyanza and the Ankole country. In the east, on the Kenya shores, it probably does not occur far north of the Mara River.

"Sclater in the 'Systema Avium Ethiopicarum,' Part I., p. 97, gives the distribution of *Numida mitrata intermedia* as the Ankoli country to the west of Victoria Nyanza.

"I have toured on two occasions very thoroughly the southern, south-eastern, and south-western portions of the Ankole district adjacent to the R. Kagera and have collected

Guinea-Fowl throughout, but have never come across a helmeted species.

"As practically the whole of the lake-shore of Victoria Nyanza has been uninhabited for a period of nearly twenty years on account of sleeping-sickness and infestation by tsetse-fly it has been impossible to make collections of birds in these localities. It is, however, now possible for members of the sleeping-sickness staff to enter such regions.

"I notice that neither Sir Frederick Jackson nor yet Dr. V. G. L. Van Someren makes any mention of the occurrence of a helmeted type in Uganda, and consequently the exhibition of this specimen at a meeting of the B. O. Club should prove of interest.

"Mr. C. W. Chorley was most surprised at finding these birds in a papyrus swamp. He came across a flock and found the birds extremely shy."

Mr. Sclater said that he was inclined to endorse Capt. Pitman's identification of this Guinea-Fowl with *Numida mitrata intermedia* Neumann, which was founded on two females obtained by Stuhlmann at Kimoani and by Emin at Bukoba, both on the southern shores of Victoria Nyanza. He also stated that there were no examples of this race in the Natural History Museum, and remarked that his identification was correct, the range of this race must be extended a good deal farther north. He further said that most of the Guinea-Fowls of Uganda belong to the other group with the tufted nostrils, identified by Dr. Hartert with *Numida meleagris* Linn.

Mr. W. L. Sclater made the following remarks on African Chats (*Œnanthe monticola*) :—

This remarkable Chat, owing to the diversity of its plumages, has been the subject of much discussion and the objective of much nomenclature. The latest notice of this bird is that of Dr. Stresemann (J. f. O. 1924, p. 545). He believes that the plumage-variation is not a sequence series

but due to mutation, and that the two principal phases, the grey and the black, co-exist side by side. This view, first suggested by Mr. C. G. Finch-Davies (J. S. A. O. Union, vi. 1910, p. 33), is probably the best explanation.

Mr. Austin Roberts (Ann. Transvaal Mus. viii. 1922, pp. 229–230) discusses the species and its synonymy, and states that he believes there are two races—a larger eastern, which he calls *Grallivora monticola griseiceps* (Blanford & Dresser), type-locality Colesberg, and a western, *Grallivora monticola monticola* (Vieill.), type-locality Namaqualand.

An examination of the extensive series in the British Museum inclines me to believe that there is no definite distinction between the birds from the typical locality and those from Upper Natal, though there is, of course, a certain amount of variation in size and tint, but that birds from Damaraland are slightly smaller, wing averaging and seldom exceeding 105 as against 115 mm., and the grey phase distinctly paler ; for this race Tristram's name *atmorii* may be utilized.

From Catumbella in Benguela there are in the British Museum a series of five males in the black phase and six females, all obtained by the late Dr. Ansorge in 1905. The males are not separable from the Damaraland males, though perhaps slightly smaller (wings 95–112 mm.), but the females are very different-looking, being a paler, slightly slaty-brown colour, while below they are much paler, being a pale fawn-brown on the throat and chest and white on the posterior half of the lower parts. For the present I propose to call these birds *Œ. m. albipileata* (Bocage).

The following is the synonymy of the three races :—

ŒNANTHE MONTICOLA MONTICOLA.

Œnanthe monticola Vieillot, N. Dict. d'Hist. Nat. xxi. p. 434, 1818: Namaqualand ; founded on Levaillant's Traquet Montagnard, figured in both phases in Ois. d'Afr. pls. 184, 185.

Saxicola leucomelæna Burchell, Travels, i. p. 335, note, 1822 : Asbestos Mts., Griqualand West ; founded on a male in the black and white phase.

Saxicola castor Hartlaub, P. Z. S. 1865, p. 747 : "Karoo" ; founded on a male in the grey phase.

Saxicola griseiceps Blanford & Dresser, P. Z. S. 1874, p. 233, pl. 37, fig. 3 : Colesberg ; founded on a male in black phase with a grey cap. Type in the British Museum.

Saxicola tephronota Gurney, Ibis, 1877, p. 343 : Potchefstrom. Type in the British Museum, a male in the grey phase.

ŒNANTHE MONTICOLA ATMORII.

Saxicola atmorii Tristram, Ibis, 1869, p. 206 : Damaraland ; founded on a male in the black and white phase.

Saxicola diluta Blanford & Dresser, P. Z. S. 1874, p. 234, pl. 39. fig. 1 : Damaraland. Type in the British Museum, a male in the grey phase from Hykomkop, Damaraland, 13.v.1866. C. J. Andersson.

Saxicola anderssoni Sharpe, ed. Layard's Bds. S. Afr. p. 249, 1877. Type in the British Museum, a male in the black phase with a grey head from Swakop River, Damaraland, 28.xii.1860.

[*Saxicola alpina* Chapman, Travels S. Afr. ii. p. 399, 1868, is a *nomen nudum*.]

ŒNANTHE MONTICOLA ALBIPILEATA.

Dromolœa albipileata Bocage, Jorn. Lisboa, i. p. 151, 1867 : Dombe, Angola.

THE BOURBON STONECHAT.

In the 'Catalogue of Birds' (vol. iv. p. 183) Dr. Sharpe called the Stonechat of the Island of Bourbon or Réunion *Pratincola borbonica* and identified it with *Motacilla borbonica*, Bory de St. Vincent, Beytr. Naturg. Mascar. p. 152. This work, which is not to be found in the library of the Natural History Museum, is apparently a German translation published in 1805 of Bory de St. Vincent's 'Voyage dans les Quatre Principales Iles des Mers d'Afrique' (Paris, 1804). On p. 400 of the second volume of the French edition there is a reference to a small bird named the "tec-tec," which was met with in the mountains of Réunion, and this is in a

footnote referred to *Motacilla borbonica* of Gmelin (Syst. Nat. p. 391). There is no description in the text, but Gmelin's diagnosis is quoted in the footnote.

Gmelin's diagnosis is based on Brisson's *Ficedula borbonica*, and the "Figuier de l'Isle de Bourbon" of the 'Planches Enluminées,' no. 705, fig. 2. These again are identified in the 'Catalogue' (vol. ix. p. 195) by Gadow, and apparently correctly, with a White-eye, now known as *Zosterops borbonica*.

It is therefore evident that the Bourbon Stonechat is without a name, and I would propose to call it

Saxicola borbonensis, nom. nov.,

pro *Pratincola borbonica* Sharpe, Cat. B.M. iv., nec *Motacilla borbonica*, Gmelin and Bory de St. Vincent.

Note on the Sickle-winged Chats.

There is in South Africa a little group of Chat-like birds allied to the genus *Œnanthe*, to which Shelley, Bds. Afr. i. p. 89, 1896, gave the name *Emarginata*. Subsequently Sharpe ('Hand-list,' iv. p. 175, 1903) unnecessarily changed the name to *Poliocichla*, and ('Ibis,' 1904, p. 325) gave a key and some useful notes on the genus, of which he recognized four species. In 1922 Roberts (Ann. Trans. Mus. viii. p. 230) discussed this group and proposed to distinguish the small short-tailed red-rumped species *sinuata* from the larger and longer-tailed *pollux*, proposing the name *Karrucincla* for the latter species.

Roberts also pointed out that the name *cinerea* used by Reichenow and Sharpe, his predecessors, is not applicable to the Great Namaqualand bird.

In the first place, the name *Œ. cinerea* of Vieillot (N. Dict. d'Hist. Nat. xxi. p. 437, 1818) is invalidated by the use of the same name on p. 418 of the same work by the same author for the European Wheatear *Œnanthe œnanthe*.

Secondly, the name "*cinerea*" of Vieillot is based wholly on Levaillant's "Trac-trac" (Ois. d'Afr. iv. p. 103, pl. 184, 1805), and a careful comparison of the description and plate

convinced Roberts, and I confirm this, that the Trac-trac of Levaillant is undoubtedly the Chat generally known as *Saxicola layardi* Sharpe. Both the description and the plate given by Levaillant clearly show the white tail-bases characteristic of Layard's Chat, but not of the Great Namaqualand Sickle-winged Chat.

This last-named bird, which is undoubtedly distinct from the Damaraland bird, appears therefore to be innominate, and I propose to call it

Karrucincla schegelii namaquensis, nom. nov., pro *Emarginata cinerea* Sharpe ('Ibis,' 1904, p. 425) and Reichenow (Vög. Afr. iii. p. 710), nec *Œnanthe cinerea* Vieill.

Type. A male from Great Namaqualand obtained by C. J. Andersson. Reg. No. 66.7.19.5. There is also a female obtained by C. J. Andersson 27. vi. 61 at Aamhoup in Great Namaqualand, which came to the British Museum from the Seebohm Collection.

There is also in the British Museum a good series of Sickle-winged Chats from Benguela obtained by Dr. Ansorge, which appear to belong to another race. I propose to name it

Karrucincla schlegelii benguellensis, subsp. nov.

Resembling *K. s. namaquensis*, but very much smaller; wing 80–85 against 95 mm.; slightly paler grey above and not so bluish, and below slightly more ashy. In size resembling *K. s. schlegelii*, but bluish-grey, not ashy or brownish-grey, above.

Type. A male from Huxe, Benguela. Collected by Dr. Ansorge 5. ix. 05. B.M. Reg. No. 1906.12.4.127.

Dimensions. Wing 85 mm.; tail 62; tarsus 31; culmen 14. Iris dark brown; bill and feet black. Nine examples collected at Huxe, one at Catumbella.

The following is a synopsis of the Sickle-winged Chats as recognized by me:—

Emarginata sinuata (Sund.). Type in the Stockholm

Museum from Saldanha Bay. *Distr.* Cape Province from about Cape Town to Port Elizabeth north to Little Namaqualand and through the Orange Free State Province to the southern Transvaal.

Karrucincla schlegelii schlegelii (Wahl.). Type in the Stockholm Museum from Onanis, Damaraland. *Distr.* Damaraland and Ovampoland (6 examples from Otjimbinque in the British Museum).

Karrucincla schlegelii benguellensis. [See above.]

Karrucincla schlegelii namaquensis. [See above.]

Karrucincla schlegelii pollux (Hartl.). Type from the Traka in the Willowmore district of Cape Province, see Sharpe in Layard's Bds. S. Afr. p. 244. *Distr.* The drier districts of Cape Province: Little Namaqualand, Orange River near Upington, Beaufort West, Deelfontein, Colesberg.

Note on *Saxicola tholloni* Oust.

This species was described many years ago by Oustalet ('Naturaliste,' 1886, p. 300) and was based on a single example obtained at Leketi on the river Alima, a tributary of the Congo, on the right bank about the middle of its course, where forest-conditions undoubtedly prevail. Recently M. J. Berlioz (Bull. Museum, Paris, 1928, p. 140) has rediscovered Oustalet's type and has compared it with a Chat obtained by M. de Rohan-Chabot in the Kubango district of Angola, and described by himself and M. Menegaux in the 'Report of the Mission Rohan-Chabot' (iv. fasc. i. p. 139, pl. 4, 1923) under the name *Œnanthe chaboti*. In his recent note M. Berlioz is satisfied of the specific identity of *Œnanthe chaboti* and *Saxicola tholloni*. He has now been good enough to send me the type of the last-named for comparison with that of *Myrmecocichla lynesi* recently described by Bannerman (Bull. B. O. C. xlvii. 1927, p. 147) and I find certain differences between the two, though they are undoubtedly closely allied. In *lynesi* the crown is a very pale brown and contrasts sharply with the general colour of the back, though this may be due to the fresh state of the plumage—it certainly gives the bird a very different

appearance from that of *tholloni* ; again, the underparts of *lynesi* are much paler and whiter than those of *tholloni*.

That they are very closely allied and that *chaboti* is based on a young *lynesi* is quite evident, but I think that until more examples of this well-marked group, specially distinguished by the white bases to the primaries, are obtained, it would be best to keep *tholloni* distinct, especially as it comes from the low-lying forest-districts of the Congo, in contradistinction to the highlands of southern Angola. I am quite in agreement with both Berlioz and Bannerman that this group should be placed in the genus *Myrmecocichla*.

We shall have then :

Myrmecocichla tholloni tholloni Oustalet.

Distr. Forest of the Middle Congo.

Myrmecocichla tholloni chaboti Meneg. & Berl., with *Myrmecocichla lynesi* Bann. as a synonym.

Distr. High plateau of the southern part of Angola.

On the Chats collected by P. E. Botta.

There has always been a certain amount of mystery about some Chats collected by P. E. Botta for the Muséum d'Histoire Naturelle in Paris early in the last century. Two of these, *Saxicola lugentoides* and *S. sennaarensis*, were described by Seebohm (Cat. Bds. Brit. Mus. v. pp. 371 & 391), and a third, *Saxicola bottæ*, by Bonaparte ('Comptes Rendus,' xxxviii. p. 7, 1854).

These three birds are all stated to have been collected in Sennar by Botta, but have never since been met with in that country.

According to the biographical information available, we find that Paul Emil Botta (1802–1870) was born at Turin, but was apparently early domiciled in France. He was an archæologist of some repute and served his adopted country as Consul at Alexandria, Mosul, and Tripoli, but previous to his consulship he undertook a journey to Yemen, and in 1841 there appeared an account of this expedition as follows :—

"Relation d'un voyage dans l'Yémen, entrepris en 1837 pour le Muséum d'Histoire Naturelle de Paris par Paul Emil Botta. Paris (B. Duprat), 1841."

Therefore, there can be no doubt that the Chats in the Paris Museum collected by him were obtained in Yemen, probably near Sanar, and that the idea that they came from Sennaar in the Anglo-Egyptian Sudan was due to a confusion of two places with somewhat similar names.

It now remains to discuss what changes of nomenclature are necessary to correct the errors of the older authors.

Saxicola bottæ (Bp.) is very briefly described; the chief characters being the large size and the conspicuous white frontal band. Bonaparte did not give any information as to where it came from, but merely stated that he named it after the celebrated traveller.

Blanford and Dresser, in their monograph of the Chats (P. Z. S. 1874, p. 230), identified *Saxicola bottæ* with the large Red-breasted Chat found only on the Abyssinian plateau, also named *S. frenata* by Heuglin. There can, however, be little doubt that *S. bottæ* was based on a similar species from the Yemen highlands, subsequently discovered by Bury and named *Œnanthe yemenensis* by Ogilvie-Grant (Bull. B. O. C. xxxi. p. 87, 1913). It has a much more conspicuous white frontal band than the Abyssinian bird.

The second of Botta's Chats is *Saxicola lugentoides* Seebohm (Cat. Bds. Brit. Mus. v. p. 371, 1881). This is quite a distinct form, somewhat near *Œnanthe schalowi* Reichw. of Kenya Colony and *Œnanthe lugubris* Rüpp. of the Abyssinian highlands, and has been obtained in fair numbers in Yemen and the Aden Protectorate, but has never been met with in Africa proper.

The third species, *Saxicola sennaarensis* Seebohm (Cat. Bds. Brit. Mus. v. p. 391, 1881) is stated to be an ally of the Familiar Chat of South Africa, now known as *Cercomela f. familiaris*, but to be larger and darker and to have certain marked differences in the distribution of the colour of the tail. Recently Admiral Lynes has identified a form of the Familiar Chat found in Darfur with this species, relying on a comparison of his specimens with the original and unique type in the Paris Museum, but I do not feel satisfied with this identification, and I believe that *Saxicola sennaarensis*

will turn out to be a distinct race of the Familiar Chat found only in the Yemen.

The following will be the synonymy of the Red-breasted Chats. In other cases the names remain as before :—

ŒNANTHE BOTTÆ BOTTÆ.

Campicola bottæ Bonaparte, 'Comptes Rendus,' xxxviii. p. 7, 1854 : Yemen highlands.

Synonym. *Œnanthe yemenensis* O.-Grant, Bull. Brit. Orn. Cl. xxxi. p. 87, 1913 : Manacha, Yemen.

ŒNANTHE BOTTÆ FRENATA.

Saxicola frenata Heuglin, Journ. Orn. 1869, p. 158 : Mense, Abyssinian highlands.

Synonym. *Saxicola bottæ* auct. nec Bp.

Since the above was written, M. Berlioz has most kindly sent me detailed descriptions of the types of these three species now in the Muséum d'Histoire Naturelle in Paris, as the types themselves are too old to be dismounted and sent to London. The details he gives confirms the identifications I have made.

Mr. GREGORY M. MATHEWS sent the following alterations :—

Neolalage, new name for *Pseudolalage* Mathews, 1928, not Blyth, 1861.

Pagodroma nivea pealei, new name for *Procellaria nivea* Peale, United States Explor. Exped. vol. viii. p. 295, 1848.

At the quotation mentioned Peale makes his *Procellaria candida* an absolute synonym of *nivea*. The bird described by Peale is from S. lat. 64° and about 104° West of Greenwich.

Mr. P. F. BUNYARD exhibited two eggs from a clutch of four of the rare erythristic form of the Grey Wagtail (*M. boarula*), and made the following remarks :—

"These eggs were found in Surrey by my friend Mr. H. R. Tutt and myself, and are unlike many of the so-called

erythristic eggs of this species that I have seen. They show true erythrism, the ground-colour is pure white, and the evenly distributed stippled markings of bright reddish-brown give them a very beautiful appearance, not unlike certain forms of Great Tit (*P. major*) or Willow-Wren (*P. trochilus*)."

Erythristic eggs have been recorded from Germany, and a clutch taken by E. W. H. Blagg in Staffordshire is recorded in Brit. Birds, vol. vii. p. 250, and Mr. C. S. Mears took a clutch of five reddish-buff eggs in Breconshire (Brit. Birds, vol. x. p. 291). In the 'Practical Handbook of British Birds' it is stated that erythristic varieties of this species are rare—I would say, exceedingly rare.

The nest was found on April 7th and contained two eggs. When inspected early on the 9th there were four, and when again visited about noon on the same day the nest was deserted, two eggs were missing, and on one of the remaining eggs there was congealed yolk.

Mr. Bunyard also exhibited a clutch of six of the rare cyanic form and a clutch of typical eggs for comparison. The eggs are smaller, on the average, than typical eggs :—

No.	Weights.	Measurements.
1.	109 m.g.	19·2 × 14 mm.
2.	110 m.g.	19·2 × 14 mm.

Average of 61 eggs :—114 m.g. ; 19 × 14·5 mm. (*Rey*).

Mr. David Bannerman forwarded the following description of a new species of Honey-Guide from Northern Nigeria, which he proposed to name :—

Indicator hutsoni, sp. nov.

Adult male. Upper-parts resemble *I. exilis exilis*, and also the pattern on the tail-feathers, the innermost pair being brown, the remainder white-tipped and terminally margined with brown. The chin is white, the upper breast olive ; lower breast light, almost cream, becoming white on the belly and flanks, the latter streaked with dark brown. The bill is larger and more swollen than in *I. exilis exilis*.

Bill 9 mm. ; wing 78·5 ; tail 50 ; tarsus 14.

Iris brown ; bill dark, except under mandible near gape, which is grey; legs and feet grey, claws dark.

Type in the British Museum Coll. ♂, Tatara, Benue Province, N. Nigeria, 28.xii.1927, No. 206. Capt. H. P. W. Hutson coll., in whose honour this new Honey-Guide is named (Reg. No. 1928.7.20.1).

Note. — Lord Rothschild has kindly compared this specimen with his series of Indicators at Tring, the only example approaching it is a bird from Degama, S. Nigeria, collected by Ansorge, 28.iv.1902. This skin does not appear to be an adult bird, which Capt. Hutson's specimen undoubtedly is. I have not, therefore, given its measurements.

The Marquis of Tavistock exhibited four live Pennant's Parrakeets (*Platycercus elegans*), which he had bred this year, and made the following remarks :—

Pennant's Parrakeet (*Platycercus elegans*) would appear to be in process of transition from a species whose young have a distinctive juvenile dress to one where the adult plumage is assumed from the nest.

Adult Pennants of both sexes are crimson and blue, with black markings. Normal young birds in first plumage are green, with some blue in their wings and tail, no black, and red only on the forehead and throat. During the first autumn there is a partial moult of the body-feathers, the new feathers showing a considerable admixture of red. Full adult plumage is always assumed with the first complete moult when the bird is about a year old.

In 1914 an imported pair of Pennants nested at liberty in the garden at Woburn, and all of the young left the nest practically in adult plumage. The skin of a bird which died is preserved in the Edinburgh Museum, and is now exhibited. It shows a little green on the mantle, but the other members of the brood showed no green at all, or at most only one or two feathers.

In an early number of the 'Avicultural Magazine' there is a record of a pair of Pennants, which produced in every brood some young which were crimson and others which were green.

In 1928 I bred, from an imported pair in an aviary, four young Pennants, which I am exhibiting. Although from the same parents, they show a striking contrast in nestling plumage. One male is mainly green with some blue in the wings and tail, a little red on the throat, forehead, flanks, and sub-caudal feathers, a reddish tinge on the rump, and no black markings.

A female is somewhat similarly coloured, but has less reddish tint on the rump.

Another male is practically in adult plumage, save that there are some green feathers on the neck, and a considerable amount of partly green feathers on the mantle.

The fourth member of the brood, probably a female, resembles the crimson male, but shows a bluer tint on the mantle.

There is no reason to suppose that captivity was responsible for the abnormal plumage of the young birds, as the majority of young Pennants bred in captivity are green, and it takes many generations of breeding in confinement to alter the plumage of a wild bird.

10 NOV 1928 PURCHASED BRITISH MUSEUM NATURAL HISTORY

NOTICES.

The next Meeting of the Club will be held on Wednesday, November 14, 1928, at PAGANI'S RESTAURANT, 42–48 Great Portland Street, W. 1. The Dinner at 7 p.m.

Members intending to dine are requested to inform the Hon. Secretary, Dr. G. Carmichael Low, 86 Brook Street, Grosvenor Square, W. 1.

Members who intend to make any communication at the next Meeting of the Club are requested to give notice beforehand to the Editor, Mr. N. B. Kinnear, at the Natural History Museum, South Kensington, S.W. 7, and to give him their MSS. for publication in the 'Bulletin' not later than at the Meeting.

Bird Room.

BRITISH MUSEUM (NATURAL HISTORY)
Z 30
10 DEC 1928
PURCHASED

BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB.

No. CCCXXVII.

The three-hundred-and-twenty-second Meeting of the Club was held at Pagani's Restaurant, 42–48 Great Portland Street, W. 1, on Wednesday, November 14, 1928.

Chairman: Dr. P. R. Lowe.

Members present:—E. C. Stuart Baker; D. A. Bannerman; F. J. F. Barrington; G. L. Bates; Miss M. G. S. Best; P. F. Bunyard; Captain H. L. Cochrane, R.N.; Sir Percy Cox; A. Ezra; Miss J. M. Ferrier; Major S. S. Flower; W. E. Glegg; B. G. Harrison; Dr. E. Hartert; R. E. Heath; Rev. F. C. R. Jourdain; N. B. Kinnear (*Editor*); Dr. G. Carmichael Low (*Hon. Sec. & Treas.*); N. S. Lucas; Admiral H. Lynes; Lt.-Col. H. A. F. Magrath; G. M. Mathews; Col. R. Meinertzhagen; T. H. Newman; C. Oldham; B. B. Osmaston; H. L. Popham; C. B. Rickett; W. L. Sclater; D. Seth-Smith; Major A. G. L. Sladen; H. Stevens; Marquis of Tavistock; A. Landsborough Thomson; H. M. Wallis; H. Whistler; H. F. Witherby; C. R. Wood; C. de Worms.

Guests present:—Dr. G. W. Collings; K. Murray; P. Phillips; Capt. R. H. Walters, R.N.; W. H. Williams.

Chairman's Address.

Part I.

Members of the B. O. C.,—

Before we pass to the rest of the agenda of the evening, I shall intervene now with the customary Chairman's Address, from the ordinary lines of which I propose to depart. This review of the ornithological events which have occurred during the past session has, as you well know, become an annual institution; and it has been the custom of my predecessors not only to give you a short account of the work in which we ourselves have been engaged, but also to include the activities of our fellow-workers in other lands. You will probably agree that that is a useful custom, as it enables us to take stock, as it were, of what is happening in the ornithological world at large, and also at the same time to gain some sort of practical idea as to whether all is well with it. As, however, it is also customary to print the Chairman's remarks in full in the 'Bulletin,' it has occurred to me that it may be a little tedious to you, as listeners, to sit for some twenty minutes while I read this review *in extenso*.

I therefore propose to-night to cut out this part of the Chairman's address and proceed to make some few remarks of a general nature upon ornithology, more in relation to the future than to the past or present.

Suppose, then, for a moment we look back, not only upon the last year, but also upon the last ten, fifteen, or twenty years, and pass swiftly over in our minds the prodigious amount of work that has been done, and is being done, at the present moment, by our systematic workers, as also the immense progress that has been made by them in straightening out the tangle of species and subspecies and also the tangle of nomenclature, and I think we have good cause to congratulate ourselves as working members of one of the great branches of Natural Science. Certainly I do not think we have lagged behind other branches of natural science in this respect. There has been, in fact, a huge output of ornithological work, both at home and abroad; but I want to accentuate the fact that in all probability at least

ninety per cent. of that work has been taken up entirely with nomenclature, species, and subspecies ; while probably fifty per cent. is purely human literature and cannot truly be said to be natural science at all. I want to make that point, because in looking forward to the years to come we can neither expect, nor hope, nor wish, that just this special kind of work should go on for ever. It is in a large sense preparatory work. There must come an end to it sooner or later. Indeed, it already seems to me, and probably to many of you, that there are definite signs that systematists are rapidly nearing the end of a task which has been well done—and the end of a task, moreover, which it was imperatively necessary to perform before entering into what we may call the promised land of further and deeper researches.

In the good old days of ornithology, as we may now call them, for they are long since past, monographs were written, in a somewhat expensive style, upon the more attractive groups of birds. Those monographs dealt with *species* from a purely descriptive point of view. They served the purpose of their time, and they were, as I have said, attractive and even, I might say, decorative. We of the present generation are deeply indebted to those pioneers of ornithology for their publication. It would never do to forget them, and it is very unlikely that we ever shall. But now, as we look forward to the future from the standpoint at which we have arrived at the present day, we seem to be almost on the *verge of another ornithological phase or period.* In the past, we have grappled, as I have said, with the intricate questions of nomenclature and the weighty task of the identification of the *species.* Now, and I believe most practical ornithologists will agree, we seem to be up against the still more difficult problem of the *genus,* while beyond the genus looms the further question of the right treatment of the family, the order, and the subclass, with the subsidiary problems involved.

What I am trying to get at is this—that although bird groups will still have to be monographed, the time seems to have come—or, at any rate, seems to be close upon us—

when they will have to be studied and monographed on an infinitely more comprehensive and all-embracing style than of old.

That I suggest to you to-night is the ornithological slogan of the future—an intensive study and monographing of bird groups,—and no better example could be quoted at the moment than the excellent work which has been lately done in this direction by Admiral Lynes on the Cisticolas. I would suggest also Colonel Meinertzhagen's paper "On some Biological Problems connected with the Himalaya," not perhaps as representing exactly what I mean, but as another attempt to deal with a group of birds on a comprehensive scale and to depart from the conventional systematic review. To make a really intensive study of any bird-group in the future will be not only a liberal education in ornithology of itself, but it will be a fascinating and absorbing study which will inevitably lead us along the road to real progress and to a deeper knowledge of birds and their origin than we possess now. But one of the first problems you come up against in the attempt is the problem of the *genus*. That problem has to be faced. Genera, in the past, have been regarded as artificial "man-made" groups; they have been regarded as representing groups conveniently arranged for the purpose of memorialization, as being in fact little better, in many instances, than glorified *memoria technica*. No doubt, in far too many cases our present genera are artificial, man-made, or unnatural groups; and the question which has got to be determined in the future is this: Are man-made and evolutionary-made genera always identical? It is easy for a man, especially if he is an ornithologist of a certain school, to make a genus. Probably Nature found it more difficult and took longer. But I am not trying to be critical or cynical, and the question is: *Do natural genera really exist*? You cannot solve that problem by simply making use of the superficial methods at present in use. To solve it and many kindred problems of what are fundamentally true affinities, and what are not, every arm in our scientific battery must be called into play. Let me quote some of them. Embryology; the study of

birds in the chick or juvenile stage; plumage-sequences and peculiarities; colour-pattern; pterylosis or the disposition of feather-tracts; the microscopic study of feather structure, a branch of ornithology strangely and woefully neglected; the study of habits; ecology; distribution, both ancient and modern; oology; osteology; myology and anatomy generally, to say nothing of geology and fossil forms, another branch of study unaccountably neglected, but which so often sheds such a penetrating light on questions of origin, affinities, and past history of groups. Then there are the principles of heredity laid down by Mendel and elaborated so brilliantly by Bateson and others, principles which I feel convinced will sooner or later shed a long-sought light on the nature of species or even higher groups. Closely bound up with the problem of heredity are the problems of sex and hybridization; and surely if you solve them, or only solve them in part, you will have gone a long way along the road to solve the problem of the species and the genus; while, finally, I think, although this seems almost a platitude, is the need for caution, when we come to deal with such structures as bills and feet and wings, in clearly appreciating how *much* their variation in structure is due to similar modes of existence and habit and how *little* to real affinities. Well, there you have a wide enough field. But need I go on—we all know of the existence of these arms in our scientific armament. Do not leave them all to the general or special zoologist in your University laboratories. The appeal I make, as your Chairman, the note I try to strike, *is that we should make more use of them* ourselves as ornithologists. One is forced to the conclusion that did we do so there would be less need in our more important publications, purporting as they do to set forth to the world the last word in ornithological progress, to follow blindly antiquated systems of classification which we might do so much to improve and which we are all aware do not even represent the views which in our better judgment—even with our present knowledge of birds—we ourselves hold.

To follow blindly the opinions or the systems of others seems a lazy policy, a "what does it matter" policy—as if

to imply that the consideration of the species alone was the only object of ornithology. It is surely a bad policy. If the genus, or any particular genus, is an artificial, unnatural, and meaningless assortment of species let us away with it—and so with families and orders and suborders. But first let us subject them to the closest scrutiny and to all the tests which we may. If, on the other hand, the genus is a natural one (and I believe in natural genera), then it is vitally important to put it into its right place, to find its proper family as quickly as may be, whatever may have been the opinion of systematists or anatomists of the past. But whatever we decide to do, whether it is in fact right or wrong, *let us at least try*, for heaven's sake, to get down to the fundamental facts of evolution and not be entirely guided by what Mr. A. or Mr. B. thought about it in the past.

The answer to all this will probably and perhaps rather naturally be—we cannot all be specialists in this or that subsidiary branch of ornithology. We must wait for and follow the work of others. That to some extent may be true ; but I am simply trying to express, as your spokesman, something of the ideal course we ought to follow when we write our monographs of the future ; and surely in following the work of others we can use our own discretion as to what looks like fundamental truth and what does not.

Above all, we can make an appeal for fresh workers in special branches of ornithology, many of which branches lie easily within the capacity of the man who has not necessarily received a special education in zoology. Don't leave it *all*, as I said before, to the zoologist in your University laboratory ! Ornithology is a good enough science to stand on its own feet.

For when we come to think of the pitifully few workers in these special branches of ornithology, some of which I have alluded to, there can, I am afraid, only be one opinion, viz., that in *this* respect ornithology lags behind other branches of Natural Science.

Part II.

I regret to have to announce the loss of three Members by death and several by resignation. The loss which the Club has sustained by the death of Mrs. Meinertzhagen is a grievous one, which all will share. We are also mourning the loss of Professor Pierre Souchkine, of Moscow, who did so much for Ornithology.

During the summer a Conference of the International Committee for the Protection of Birds took place at Geneva, under the Presidency of Dr. Gilbert Pearson. Proposals were made to refer various questions connected with the protection of migratory and other birds to the League of Nations. Mr. W. L. Sclater was present as representing the B. O. U. As far as Great Britain is concerned, His Majesty's Government has decided that the time is not yet ripe to refer these problems to the body in question. In connection with the International Conference held in October 1927 at the Foreign Office, a report of the proceedings and the resolutions passed was published by H.M. Government, and may be obtained at H.M. Stationery Office.

During the Session a special general meeting was held for the purpose of revising the rules of the Club.

As regards *work in the field*, an expedition to Greenland under the leadership of Dr. T. Longstaff was made by the Oxford University Greenland Expedition, with useful scientific results. Messrs. J. Delacour and P. Jabouille, who were accompanied by Mr. Willoughby P. Lowe, have returned from their fourth expedition to Indo-China with a very large collection of living birds, as well as skins of many species, of which twenty-one proved to be new to science.

Other Members who have been active in the field were Admiral Hubert Lynes and Messrs. B. B. Osmaston and H. Whistler in Kashmir ; Capt. C. R. S. Pitman in Uganda ; Mr. H. F. Witherby in Spain ; Mr. E. C. Stuart Baker and General Betham in Finland ; Mr. G. L. Bates in West Africa ; Major W. M. Congreve in Transylvania ; Rev. F. C. R. Jourdain in Morocco ; Mr. C. Boden Kloss in Borneo, while a new Member (Mr. P. W. Reynolds) has been doing some excellent work in Tierra del Fuego.

Reports of some of these activities have appeared in the 'Bulletin,' while the material brought back and the information acquired have added considerably to the sum total of our ornithological knowledge.

Turning to a consideration of field-work by ornithologists of other countries, I would make special reference to that of Dr. Hugo Granvik in Kenya Colony, Herr Paul Spatz in northern part of Senegal, of Dr. Ernst Mayer in North-west New Guinea, and of Herr G. Heinrich and Dr. Damholz in Persia.

Before, however, coming to the end of this brief review of the chief events of the Session, I cannot refrain from drawing your attention to the excellence of some of the exhibits at our various meetings, especially that of Lord Rothschilds's illustrating the Eggs of Rails and Hermaphrodite Birds ; Mr. A. L. Butler's rare and melanistic varieties of Humming-birds, and Mr. Jean Delacour's large series of new forms from Indo-China. Finally, we have to register the grateful thanks of members to Mr. B. W. Tucker of Oxford University for his illuminating address on Gynandromorphism in Birds.

We pass now to a consideration of some of the principal works which have been completed during the session, and I think it may be said with truth that the output indicates that ornithologists are still as keen as ever to publish their observations for the benefit of their fellow-workers.

Mr. W. B. Alexander, for instance, has brought out a useful guide to marine birds in his 'Birds of the Ocean,' while Mr. Stuart Baker has completed the fifth volume of the 'Fauna of British India,' and Mr. H. C. Robinson has to be congratulated on the appearance of vols. i. and ii. of the 'Birds of the Malay Peninsula.'

One part of the volume of coloured plates of the 'Birds of Ceylon' by Mr. G. M. Henry has been published. This volume, when complete, will form a useful supplement to Mr. Wait's work on the avifauna of that country. Mr. Whistler's 'Popular Handbook of Indian Birds' will supply a long-felt want to residents in India.

We are glad to record the appearance of the long-promised new edition of Saunders's 'Manual' by our former President

Dr. Eagle Clarke, and our two energetic lady members in the north (Miss Baxter and Miss Rintoul) have compiled a useful summary in the 'Geographical Distribution and Status of Birds in Scotland,' while Mr. McWilliams has given us a good local work in the 'Birds of the Island of Bute.' Of other works I must not omit to mention B. Beetham's 'Among our Banished Birds,' Douglas Dewar's 'Birds at the Nest,' and Canon Raven's 'Ramblings of a Bird Lover.' Mr. C. E. Bent has completed another of his invaluable 'Life-Histories of North American Birds—Limicolæ,' pt. i.

Among the works which are in process of being written are the following :—Sir Geoffrey Archer on the 'Birds of Somaliland'; Mr. D. A. Bannerman on the 'Birds of Western Africa'; Mr. G. L. Bates, 'Handbook of the Birds of West Africa'; Mr. C. F. Belcher, 'Handbook of the Birds of Nyasaland'; Mr. J. Delacour, a work on the 'Birds of France'; Col. R. Meinertzhagen on the 'Birds of Egypt.'

Following on these works in book-form come a large number of important papers dealing with various aspects of ornithology. I regret that these are too numerous for individual mention, and all it is possible to do is to notice a few of the larger *, such as Prof. Ghigi's "Monograph of the Guinea Fowls"; Dr. Ivan Hortling's "Birds of Yttero, Gulf of Finland"; P. Madon's "The European Corvidæ"; Messrs. W. P. Taylor and W. T. Shaw's "Birds of Mt. Ranier (Washington)"; Dr. A. Wetmore's "Birds of Porto Rico and the Virgin Is."; and the late Dr. E. Sundstrom's "Birds of Patagonia."

Mr. G. L. Bates described four new subspecies of West African birds as follows :—

Urolais epichlora cinderella, subsp. nov.

Three specimens collected at Oku, in the Banso Mts. west of Kumbo, Cameroons, alt. 6000 or 7000 ft., in 1925, were

* [Dr. Lowe has omitted to mention his own important paper "Studies and Observations bearing on the Phylogeny of the Ostrich and its Allies," in which new light is thrown on the origin of birds.—Ed.]

overlooked by me when I described other birds from the same place two years ago. As I had formerly got *U. epichlora epichlora* from very nearly the same locality, I labelled these Oku birds as that without comparison; but it was recently pointed out to me that they are quite different, and different in exactly the same manner as *Laniarius atroflavus craterum*, *Alseonax minimus okuensis*, and *Campethera tullbergi bansoensis* differ from their nearest representatives found in those same mountains, in two of the three cases only a few miles away—viz., by being duskier, or duller yellow where they are yellow, on the underside (see Bull. B. O. C. vol. xlvi. p. 87 ff.). These are in addition to some previously described by Mr. Bannerman which generally also differed in the same way.

The three specimens referred to are darker green on the upperside, and on the underside dull greenish-grey tending to whitish on the median line (while the underside in *U. e. epichlora* is yellowish-isabelline).

Measurements of one male, wing 59 mm.; tail 91; tarsus 20; two females, wing 51·5, 53·5; tail 60, 75; tarsus 20–20·5; bill 12–12·5. The wing of the one male is a little longer than in any of *U. e. epichlora*; females measure about the same as those of *U. e. epichlora*.

Type in the British Museum. ♂ ad. Oku, west of Kumbo, Cameroon, alt. 6000 ft., 11 Feb., 1925. No. 8244. G. L. Bates coll. Reg. No. 1926.8.8.418.

Thamnolæa cinnamomeiventris bambaræ, subsp. nov.

Geographically nearest representative of the species in Uganda, 2000 miles away, viz., *subrufipennis*, which differs but very slightly from the typical *cinnamomeiventris* of S. Africa.

The new race may be compared in the same terms with both:—

(1) Less extensive rufous, both on rump and on breast in both sexes.

(2) Black of male not so deep a black.

(3) White feathers on bend of wing of male not wholly white, but particoloured white and black.

(4) Slate feathers on breast of female with blackish shaft-streaks.

Two adult males and three adult females and one young male, all from rocky cliffs overlooking the Niger at Kulikoro, just below Bamako, French Sudan.

Obs. They run for safety into the crevices of the rocks, and undoubtedly nest there. From my notebook : "Some melodious notes, 4 or 5, in a clear voice, joined together into a warble." "Usual cries a high-pitched and clear 'pee-ee!' or 'pee-ew!'"

Measurements. Wing, two males, 106, 111 mm.; three females, 103–106; tail 93–99; tarsus 28–30; culmen 17·5–19.

Type in the British Museum. ♂. Kulikoro, French Sudan, 7 July, 1928. No. 9674. G. L. Bates coll. Reg. No. 1928.11.21.2.

Mesopicus johnstoni sordidatus, subsp. nov.

This is another bird of my 1925 collection that was not described two years ago, the reason being that I hesitated to found a new race on a single somewhat immature specimen. Its immaturity would not account for all the difference it shows from *Mesopicus johnstoni* of the Cameroon Mountains, however; immature birds of these Woodpeckers differ but little from adults. This bird has the throat grey, the breast dull olive-green, and the belly light yellowish-green, and all the breast is marked by very distinct though rather narrow dark shaft-streaks; while the underside in *M. j. johnstoni* is clear lemon-yellow with only very fine, scarcely noticeable, shaft-streaks or shaft-lines.

Type in the British Museum. ♂. Oku, west of Kumbo, Cameroon, alt. 6000 ft., 10 Feb., 1925. No. 8241. G. L. Bates coll. Reg. No. 1926.8.8.145.

Francolinus coqui spinetorum, subsp. nov.

Described from a single adult male, which differs entirely from any other race.

The nearest described race geographically is *buckleyi*—known from two females from Accra and two somewhat similar females from Wurno in N. Nigeria and from Gambia

(if they do belong here)—the Accra ones are the typical *buckleyi*. In this species there is a conspicuous difference between the sexes, but that concerns only the plumage of the lower neck and crop ; in all the other plumage the sexes are alike, and comparison is safe even if we have different sexes.

The next nearest recorded race geographically is *schlegelii*, and for comparison of it I have only a fine water-colour life-sized figure of the type ; it was described from Bahr-el-Ghazal, and has been reported from N. Cameroon.

In some ways my bird most resembles *hubbardi* of the eastern side of Lake Victoria.

	Top of head.	*Back.*	*Underside.*
T. c. buckleyi ..	Dark brown.	Very grey, much black.	Scattered bars on whole breast and flanks.
T. c. schlegelii ..	Mottled black.	Much grey, no distinct bars.	Whole breast closely barred.
T. c. hubbardi ..	Dark brown.	Much black, and prominent light bars.	Bars on crop and flanks only.
T. c. spinetorum (the new race).	Rufous-brown.	No grey and almost no black; bars not prominent.	Bars on crop and flanks only.

The female example from Wurno, placed with *buckleyi*, resembles the male of *T. c. spinetorum* only fairly well, but is nearer this form than any of the others. Wurno is in the same latitude and the same kind of country as the locality of the new specimen.

Type in the British Museum. ♂. 70 miles S.W. of Say (on the Niger), Haute Volta, May 1928. No. 9469. G. L. Bates coll. Reg. No. 1928.11.21.1.

Mr. Bates also made some remarks on the Blue-spotted Dove :—

Turtur afer and Turtur abyssinicus.

That there are two distinct species of Blue-spotted Dove has been clearly shown by Sclater and Praed (‘Ibis,’ 1920, p. 835). They both range all the way across Africa, but the

black-billed *abyssinicus* is a bird of the drier belt lying further north, and I have never found the two together in the same localities. Linnæus's *Columba afra* was, according to the authorities just mentioned, the red-billed one; but that has, I believe, never been found in Senegal, the country from which it was said to have come. As it is found in Gambia, however, a bird from that country might easily have been supposed to have come from Senegal. The very distinct light birds collected in Senegal by Riggenbach, which were naturally (from the locality) supposed to be the true *Turtur afer*, when Rothschild's *Turtur afer sclateri* was founded for all the rest of the species except the Senegal ones, were in reality the black-billed *abyssinicus*. This Dr. Hartert helped me to establish by the specimens at Tring. There is only one well-established subspecies of *Turtur afer*—viz., *Turtur afer mearnsi* Sclater & Praed.

Moreover, I believe *Chalcopelia delicatula* Sharpe to be merely a synonym of *Chalcopelia abyssinica* Sharpe. We have, then, in reality only three forms left :—

(1) *Turtur afer afer* (Linn.).

Distr. From Gambia to Kenya etc. (forest and savanna).

(2) *Turtur afer mearnsi* Sclater & Praed.

Distr. Abyssinian and Shoan highlands.

(3) *Turtur abssyinicus* (Sharpe).

Distr. Dakar to Eritrea (semi-arid belt).

Mr. Hugh Whistler exhibited a Baikal Teal (*Anas gloscitans*) which he had himself shot at Battle, Sussex, on 14 Nov., 1927. It was a male just completing the autumn moult, and the exhibitor claimed that the bird should be considered as a genuine addition to the British List. He went on to remark that the duck fell under that class of birds which were always regarded with suspicion when shot in England on the ground that they might be "escapes" from private waters. In his opinion this was a genuine wild straggler, as from its demeanour and strong flight it did not appear to have been in captivity. Also there was no

reason why the bird should not appear as a straggler, as was evident from the following facts.

The Baikal Teal is a very common and highly migratory E. Asiatic species, breeding in Eastern Siberia from the Lena to Anadyr and Kamtschatka and wintering in Southern Japan, Southern China, and Formosa. It has been recorded on a good many occasions in India and Assam, naturally most often on the eastern side of India. There are, however, a number of records of its occurence in recent years in Central South Europe. For instance, specimens have been obtained N.E. of Modena in December 1881, at Val Vigizzo in 1911, in Canton Ticino, Italy, in 1913, and at Malta on 6 April, 1912. This last was one of a party of three, the other two not having been killed. These records, with their implication of other specimens unnoticed, suggest that it is not unusual for a few birds to straggle from their normal migration-routes, probably because they had got attached to parties of other species of duck. It might, of course, be argued that these birds were similarly escapes from waters on the Continent, but it is significant that in November 1836 a whole flock of Baikal Teal appeared on the R. Saône in France near Chalon, while Latham in his 'General Synopsis' (1780) says that it had been taken in a decoy in England. At these early dates the birds could hardly have been escapes.

The exhibitor also stated that he put a notice into the 'Field' of 26 January, 1928, recording this occurrence, and asking whether any Baikal Teal were known to be kept in England and, if so, whether any had escaped. The only reply was from Mr. A. H. Baring, who stated that before the War there had been a large importation of these birds on one occasion and that he had therefore not recorded a full-plumaged drake which he had shot at Winchester on the Itchin about 1915. The present specimen, however, could hardly have had any connection with that batch of birds.

Finally, the exhibitor remarked that when we are only just learning that Asiatic species of weak flight, such as *Acrocephalus dumetorum* and *Sylvia curruca affinis*, are

probably not infrequent on migration in the British Isles there appears no reason to record the occurrence of a strong-flying migratory duck with suspicion.

Mr. E. C. Stuart Baker communicated the following note on the races of *Sterna albifrons* and on certain other Oriental birds :—

In working through the Indian Terns, I have had to examine, among others, the immense series of Little Tern in the collection of the British Museum. The study of these little birds is rendered very difficult by the fact that in the winter months they are great wanderers and are often found very far from their breeding haunts. At the same time the tropical forms are very early breeders, as their young have to be hatched and reared before the rains break and the sand-banks are flooded out by the rising rivers. It follows, therefore, that many of the northern forms have not yet left India for the north when the southern forms have nearly finished breeding. In the following notes I have, accordingly, only considered these specimens which are undoubtedly breeding-birds, or which there is strong reason to believe to be such.

The following seem to be the characters which can be used to assist in a diagnosis of the geographical races into which *Sterna albifrons* can be divided.

Size of bill, both in length and stoutness.

Colour of shafts of primaries.

Colour of rump, upper tail-coverts, and tail in comparison with back.

Employing these characters I find that there appear to be five races within the Oriental region covered by the "Fauna of India" series. These divide themselves fairly easily into two groups. First, those with larger stouter bills and with white, or almost white, rumps and upper tail-coverts, including *Sterna albifrons albifrons* and *Sterna a. sinensis*. Secondly, those with smaller, more slender bills, whose rumps and upper tail-coverts are almost, or quite, concolorous

with the back. These include *Sterna a. prætermissa* (subsp. nov.), *Sterna a. pusilla*, and *Sterna a. saundersi*.

In detail these five races are :—

(1) Sterna albifrons albifrons.

Sterna albifrons Vroeg, Cat. Verzam. Vogel. Adum. p. 6, 1767.

Type-locality. Holland.

Distribution. Temperate Europe, North Africa, Western Asia to Transcaspia and possibly Persia. In winter south to Somali coast in Africa, the Mekran coast and Sind in India.

Characters. Wing 169 to 183 mm.; culmen 23 to 24, and stout; rump, upper tail-coverts, and tail pure white. Shafts of the first two primaries brown.

(2) Sterna albifrons sinensis.

Sterna sinensis Gmelin, Syst. Nat. i. p. 608, 1789.

Type-locality. China.

Distribution. The coasts of India, Burma, and China; the Malay States and most of the islands of the Malay Peninsula. In China on the bigger rivers for many hundreds of miles from their mouths.

Characters. Wing 168 to 183 mm.; bill 26 to 32, and stout; rump and upper tail-coverts white or shaded with pearly-grey. *First primary shaft pure white.*

(3) Sterna albifrons pusilla (*gouldi* auct.).

Sterna pusilla Temm. Man. d'Orn. 2nd ed. iv. p. 464, 1840.

Type-locality. Java.

Distribution. The great rivers of Northern India and Burma; through the Malay Peninsula to the Celebes and Philippines.

Characters. Wing 160 to 175 mm.; bill 26 to 30, and slender; rump and upper tail-coverts grey, very little paler than the back. First primary-shaft pale brown, second darker.

(4) **Sterna albifrons prætermissa**, subsp. nov.

Type-locality. Mesopotamia.

Distribution. Mesopotamia, the islands of the Persian Gulf, and the Sonmeani swamp on Mekran.

Characters. Wing 160 to 174 mm.; bill 26 to 28, and slender. Rump, upper tail-coverts, and tail grey, but distinctly paler than the back. Shafts of both first and second primaries dark brown.

Type in the British Museum. ♀. Būna Island, Persian Gulf, 28 May, 1921. Cox Cheeseman coll. Breeding. Reg. No. 1924.3.20.157.

(5) Sterna albifrons saundersi.

Sterna saundersi Hume, Str. Feath. v. p. 324, 1877.

Type-locality. Karachi, Sind.

Distribution. Southern coasts of Red Sea to the Somali coast in East Africa and southern coasts of Persian Gulf to Karachi in Sind, India.

Characters. Wing 156 to 170 mm.; bill 27 to 29, and slender. Rump concolorous with back, which is paler than in any of the other races. Shafts of first three primaries black.

Ardea cinerea tectirostris.

Ardea tectirostris Gould, P. Z. S. p. 22, 1843: New South Wales.

Recently, whilst working on the Indian Herons, I had to compare *Ardea jouyi* Clark with the typical form *A. c. cinerea* Linn., of which the type-locality is Sweden, the type-locality of *jouyi* being Korea. When laid out in rows the specimens in the British Museum Collections at once showed that the European birds were much darker than those from further East, whilst the specimens from Mesopotamia, Persia, and India agreed well with the Chinese *A. jouyi*, but not with the typical form in depth of colour. *A. jouyi* was separated primarily on a supposed difference in the shape of the bill, a difference not substantiated if a series is examined. On the other hand, the pale coloration is very apparent, and this is the character upon which Gould created his *Ardea leucophæa*. As the Indian and Chinese forms do not appear

to me to be in any way separable, *Ardea jouyi* of Clark, 1927, becomes a synonym of *Ardea leucophæa* of Gould, 1848, which is itself a synonym of his own *A. tectirostris* of 1843, founded on a young bird from New South Wales.

Ardea imperialis, nom. nov.

This large Heron has been generally known as *Ardea insignis*, the reference being given as Hume, 'Stray Feathers,' vi. p. 470, 1878. But the name *insignis* is preoccupied, for it is first given by Hodgson in 1844, Zool. Misc. p. 86, where it is a *nomen nudum*. This is then cited by Gray in 1846 as a synonym of *nobilis* Blyth (Gray, Cat. Birds Nepal, p. 133), and again as a synonym of *sumatrana* Raffles by Gray in 1871 (Handb. Gen. Sp. Birds, p. 27). The name consequently cannot be resuscitated by Hume for his bird.

Squamatornis, gen. nov.

The small Bulbul which I called *Rubigula squamata webberi* in the 'Avifauna British India,' vol. i. p. 409, cannot be known by that generic name. The type of *Rubigula* is *Turdus dispar* Horsfield, which I cannot separate from *Pycnonotus*, but, even if *dispar* is separable, the curious little squamated Bulbul with its very specialized colour-pattern and short broad bill does not seem to be generically the same and must be given a name. I therefore separate it under the above name.

Characters. The curiously squamated under plumage; bill broader than high and shorter than the tarsus; rictal bristles well developed; nostrils exposed; tail well graduated.

Mr. P. F. Bunyard exhibited two clutches of six and one each of seven, five, and four eggs of the Greenland Wheatear, *Œnanthe œnanthe leucorrhoa*, from the neighbourhood of Godhavn, Greenland, June 3rd and 4th, 1927, and also British-taken clutches of Wheatear, *Œ. œnanthe œnanthe* for comparison, and made the following remarks:—

It will be seen from the figures below that on the average the eggs of the Greenland Wheatear are very much heavier

and rather larger than those of our common Wheatear, and when compared with recently collected eggs the former show a warmer shade of pale blue.

Some of the eggs are much more heavily marked than any in the British series.

Dresser gives the average measurements of 21 eggs of *Œ. œ. œnanthe* as 21·71 × 16·09 mm. and the average weight as 166 mg.—this is unfortunate, as they refer to Rey's figures, which most probably are for Continental-taken eggs, and apparently neither of these authors recognized the Greenland form. The 'Practical Handbook of British Birds' gives the average measurements of 50 *Œ. œ. œnanthe* eggs (presumably all British) as 20·7 × 15·8 mm.

My average for 28 eggs British is 21·2 × 15·7 mm. :—

Greenland Wheatear, *Œ. œ. leucorrhoa*, 28 eggs, Bunyard's.		British Wheatear, *Œ. œ. œnanthe*, 28 eggs, Bunyard's.	
Weight.	*Measurements.*	*Weight.*	*Measurements.*
Max. 194 mg.	23·6 × 16·8 mm.	Max. 171 mm.	22·3 × 16 mm.
Min. 152 „	20 × 15 „	Min. 139 „	20·3 × 16 „
Av. 170·5 mg.	21·7 × 16 mm.	Av. 153 mm.	21·2 × 15·7 mm.

The weights of Greenland eggs have not (so far as I am aware) been previously given—these were all received direct from my collector in Greenland.

Mr. Bunyard also exhibited on behalf of Mr. Massey an album of plates illustrating the eggs of the rarer Limicolæ and their variations, not figured by Poynting.

These plates have been very beautifully painted by Miss Edna Bunyard from specimens in Mr. Massey's Collection.

Colonel Meinertzhagen exhibited two birds from Egypt, which are the property of the Egyptian Government and of considerable interest :—

Falco naumanni, ♂, a semi-albinistic variety shot by Mr. M. J. Nicoll near the Pyramids on 22.iii.1918. In this

variety the whole of the red on both upper and underparts is replaced by pure white. Otherwise identical with a normal specimen. The contrast of the blue-grey head and the white mantle on the upper parts and the clear black spotting on the white underparts is most effective and beautiful.

Anas formosa × *A. acuta*. A male shot on 26.i.1923 near Cairo, and is believed to be a wild hybrid between *Anas formosa* and *Anas acuta*. In size the bird is intermediate between the two species. The head, neck, and breast are those of *Anas formosa*, whilst the back, flanks, wings, and tail are those of *Anas acuta*. The specimen is of great interest as giving us an indication of the source whence migratory Duck can arrive in Egypt. *Anas formosa* does not occur much west of Lake Baikal, and the parents of this hybrid must therefore have hatched their brood near or east of Lake Baikal.

Both these specimens will be figured in my forthcoming book on the Birds of Egypt.

Colonel Meinertzhagen also described a new race of Coronetted Sand-Grouse, as follows:—

Pterocles coronatus vastitus, subsp. nov.

Intermediate between *P. c. coronatus* and *P. c. atratus*. The male almost lacks the dark (almost black) markings characteristic of *P. c. atratus*, but is considerably darker than *P. c. coronatus*. Upper tail-coverts a distinct shade darker and more ferruginous than in *P. c. coronatus*. The female is even more distinct, the dark markings on the back not being nearly so conspicuous as they are in *P. c. atratus*, though much more marked than in *P. c. coronatus*. Underparts not so yellow as in *P. c. coronatus* and more closely resembling the underparts of *P. c. atratus*.

Type in the Tring Museum, ♂. Wadi Martaba, Southern Palestine (Aharoni), 22.xi.1910.

Eleven examined.

Distribution. The deserts of Southern Palestine, west of the Jordan–Dead Sea Depression and north-eastern Sinai.

NOTICES.

The next Meeting of the Club will be held on Wednesday, December 12, 1928, at PAGANI'S RESTAURANT, 42–48 Great Portland Street, W. 1. The Dinner at 7 p.m.

At this Meeting Professor Arthur Thomson, Professor of Anatomy at Oxford University, will give a lecture and lantern demonstration on the anatomy of the bird's eye, entitled: "The Riddle of the Pecten, with Suggestions as to its Use." It is hoped that there will be a good attendance.

Members intending to dine are requested to inform the Hon. Secretary, Dr. G. Carmichael Low, 86 Brook Street, Grosvenor Square, W. 1.

Members who intend to make any communication at the next Meeting of the Club are requested to give notice beforehand to the Editor, Mr. N. B. Kinnear, at the Natural History Museum, South Kensington, S.W. 7, and to give him their MSS. for publication in the 'Bulletin' not later than at the Meeting.

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BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB.

No. CCCXXVIII.

The three-hundred-and-twenty-third Meeting of the Club was held at Pagani's Restaurant, 42–48 Great Portland Street, W. 1, on Wednesday, December 12, 1928.

Chairman: Dr. P. R. Lowe.

Members present:—E. C. Stuart Baker; F. J. F. Barrington; Miss M. G. Best; Captain H. L. Cochrane, R.N.; R. H. Deane; J. Delacour; A. Ezra; W. E. Glegg; B. G. Harrison; Dr. E. Hartert; R. E. Heath; Rev. F. C. R. Jourdain; N. B. Kinnear (*Editor*); Dr. G. Carmichael Low (*Hon. Sec. & Treas.*); N. S. Lucas; Admiral H. Lynes; Captain W. E. F. Macmillan; Lt.-Col. H. A. F. Magrath; Dr. P. H. Manson Bahr; G. M. Mathews; E. G. B. Meade-Waldo; J. L. Chaworth Musters; T. H. Newman; C. Oldham; B. B. Osmaston; G. H. R. Pye-Smith; D. Seth-Smith; Major A. G. L. Sladen; Marquis of Tavistock; B. W. Tucker; H. Whistler; H. F. Witherby.

Guests present:—Professor Arthur Thomson; E. S. Wilkinson.

Professor Arthur Thomson, Professor of Anatomy in the University of Oxford, read a paper on the pecten of the bird's eye, illustrated with lantern-slides, entitled

The Riddle of the Pecten, with suggestions as to its use.

The pecten, comb, or fan of the bird's eye is a membranous organ attached to the optic nerve, and projects into the vitreous body for a variable distance. It is of a black colour, this being due to a dark pigment, and consists of a thin connective tissue covered with endothelium which supports a network of capillary vessels. Folded upon itself like the parts of a fan, it forms a series of laminæ which vary in number in different species of birds. Casey Wood gives the average as 16, with a range from 5 to 30. The pecten is essentially a vascular organ, and Kalt believes that it gets its blood-supply from the external branch of the internal carotid, which, immediately after leaving the temporal, forms a large plexus. The venous blood is carried away by a large choroidal vein which pierces the sclerotic. The free edge or bridge is covered, as are the sides of the organ, with the hyaloid membrane, structurally similar to the membrana limitans of the retina and continuous with it.

According to Casey Wood the avian pecten exhibits three fairly definite varieties :—

I. Those pectens whose mass uniformly springs from and equally covers the optic disc. Such pectinate bodies do not extend into the vitreous farther than the length of their widest segment, and they are sessile on the face of the papilla. Eagles, Owls, etc.

II. Some pectens, while they originate from the whole surface of the optic disc, immediately slope away from the visual axis, approach the bulbar wall and terminate without projecting far into the vitreous. Pigeons, Cuckoos, Gulls, etc.

III. This class includes those pectens (usually of slender proportions) that arise from the whole surface of the optic papilla, and then either curve towards and follow the concave wall of the eyeball, or they proceed in a straighter line until they touch (or nearly reach) the posterior surface of the lens, generally near its equator. Swallows, etc.

Intermediates between Classes II. and III. are also met with.

The pecten and the general appearance of the ocular fundus may be of some value from a taxonomic point of view.

The function of the pecten has given rise to much discussion, and various views have from time to time been put forward to explain its use. For example, it has been considered an erectile organ, again as a screen to protect the retina against the rays of the sun, again as an organ of nutrition for the vitreous, again as a sense organ, again as an absorbing surface for light rays. Franz and Hushke point out that the more the bird makes use of monocular vision the more the pecten is developed, that in song-birds it is large and has many folds, while in Swallows with better accommodation it is poorly developed. Owls also have a small pecten.

Professor Thomson discussed some of these views, and said he believed that the pecten acted as a dark mirror and reflected the rays of light that fall upon it on to a part of the retina. He believes that rays of light coming from above and in front are reflected by the bridge of the pecten on to the retina, and gives birds feeding on the ground warning of their enemies, which attack them from the air. That this cannot hold in all cases is clear, as birds of prey, some night birds, Ostriches, and other birds that are not attacked still have well-developed pectens.

Reptiles also have pectens, so the bird has evidently inherited this structure from its reptilian ancestry.

Professor Thomson concluded his lecture by showing some ingenious apparatus devised by himself to support his contentions.

Mons. J. Delacour and Mr. N. B. Kinnear sent the following note on the Red Jungle-Fowl, with a description of a new race :—

It is generally agreed that the Red Jungle-Fowl is the originator of the various breeds of domestic fowl, and that being the case, the name for the typical form is *Gallus gallus gallus*, with Pulo Condor as the type-locality.

As far as we know, there are no specimens in any museum of the indigenous Jungle-Fowl from Pulo Condor*, but there is every probability that they were similar to those existing in a wild state in Cochin China, and accordingly birds from that locality may be taken as typical.

The three mainland forms at present recognized will therefore stand as follows :—

Birds with large bluish-white ear-lappets from Cochin China, Cambodia, Laos, and Annam (except extreme north)	*Gallus gallus gallus.*
Birds with smaller red ear-lappets, from Siam, Malay Peninsula, Burma, and Yunnan	*Gallus gallus robinsoni.*
Birds with similar sized ear-lappets to the last, but white in colour, from India	*Gallus gallus murghi.*

Of the above races we have examined over fifty examples, and can find no constant difference in the colour of the plumage or shape and length of the neck-hackles.

It is, however, most desirable to compare a series of heads of Jungle-Fowl from these areas preserved in weak formalin to see whether the shape, size, and colour of the combs and lappets, which cannot be seen for certain in the dry skin, vary.

During the Franco-British Expeditions to Indo-China in 1926 and 1927 a series of Jungle-Fowl were collected in the extreme north of Annam and Tonkin which appear to be

* Pulo Condor is an island off the mouth of the Mekong River, now used as a French penal settlement. We have no exact information of the present status of the Jungle-Fowl there, except that M. A. Neveu, Director of the Saigon Zoological and Botanical Gardens, has informed us that he has more than once sent live birds from Cochin China to Pulo Condor.

different from any of the mainland forms, and we propose to call it:—

Gallus gallus jabouillei, subsp. nov.

Male. Differs from all other mainland forms in the still smaller red combs, small red ear-lappets, seldom washed with white, and shorter and rather redder neck-hackles.

Female. Yellow of the neck-hackles of a deeper and richer colour.

Type in the British Museum. ♂. Backan, N.E. Tonkin, 23 December, 1926. No. 2092. Reg. No. 1928.6.26.91.

Ten specimens examined.

Note.—Named in honour of Mons. P. Jabouille, who first pointed out to us, before any specimens were collected, the difference between the Jungle-Fowl of Tonkin and those from other parts of Indo-China.

Mons. J. Delacour also described two new birds from southern Indo-China :—

Pitta soror intermedia, subsp. nov.

Intermediate between *P. s. soror* from Central and Southern Annam and Cochin China, and *P. s. tonkinensis* from Tonkin. Occiput and nape light blue with a slight greenish tinge.

Size also intermediate.

Iris brown ; bill blackish-brown ; legs and feet horny.

Measurements. Type ♂ : wing 121 mm. ; tail 66 ; tarsus 49 ; culmen 29.

Type in the British Museum. ♂. Phuqui (Northern Annam, 300 feet), 9 March, 1928. No. 3398. Reg. No. 1928.6.26.90.

Seven specimens examined : 6 ♂, wing 115 to 122 mm. ; 1 ♀, wing 115 mm. From Phuqui and Napé (Laos).

Houbaropsis bengalensis blandini, subsp. nov.

Closely resembling *H. b. bengalensis*, but differing in the rather richer colour of its plumage, in the black ornamental feathers of the male being shorter, the comparatively shorter wings and broader and flatter bill.

Iris brown ; bill horny blackish-brown ; legs and feet yellowish-brown.

Measurements. Type ♂ : wing 322 mm. ; tail 148 ; tarsus 132 ; bill from gape to tip 58 ; exposed culmen 41.

Type in the Paris Museum, Su-Vu (Soai-Reing, Cambodia), sea-level. 7 July, 1928. No. 6.

Nine specimens examined : 7 ♂, wings 315 to 322 mm.; bill 55 to 60 mm. 2 ♀, wings 325 mm. ; bill 57 to 60 mm. Su-Vu (80 kilometres north of Soai-Rieng, Cambodia).

Named in honour of M. A. Blandin, Resident of the Soai-Rieng Province.

Macropygia ruficeps engelbachi, subsp. nov.

Nearest to *M. r. assimilis* from Burma, but darker and richer, with broader, richer and more distinct rufous edgings to the wing-coverts ; the black mottling on the breast of female and young is slighter.

Iris pale grey ; bill brown ; legs and feet purplish-red.

Type in the British Museum. ♂. Xieng, Khouang (4000 feet), Laos, 21 January, 1925. No. H. 1794. Reg. No. 1926.9.8.163.

Eleven specimens examined from Xieng, Khouang : 7 males and 4 females.

Named in honour of Dr. Pierre Engelbach, M.O., in Laos.

Mr. N. B. Kinnear communicated the following :—

During a visit this spring to Transylvania, Major W. M. Congreve collected a few birds which he kindly presented to the National Museum. Among them were three Marsh-Tits which appear to be distinct from any others I have been able to examine, and I propose to distinguish them under the name of

Parus palustris congrevei, subsp. nov.

Differs from specimens of *P. p. stagnatilis* from Macedonia and Roumania (Hermanstadt, Lotru, and Sâvârsin) in the greyer and less silver mantle and purer white underside, not washed with buff as in examples from the above localities.

Type in the British Museum. ♂. Reytezet (3400 feet),

Transylvania, 14th April, 1928. Collected and presented by Major W. M. Congreve. Reg. No. 1928.6.16.32.

Measurements. 2 ♂, wing 68–70 mm. ; 1 ♀, 64 mm.

Note.—Through the kindness of Dr. Laubmann, of the Munich Museum, I have been able to examine a series of 19 skins from Roumania and Macedonia which were enumerated by Dr. Stresemann in his 'Avifauna Macedonia' under the name *P. communis fructiceti* (=*P. p. palustris*).

These birds Dr. Stresemann compared with topotypes of *P. p. stagnatilis*, which he considers is synonymous with *P. p. palustris*. There is not, however, sufficient material here to decide whether Dr. Stresmann is correct or not, and for the present I think it is better to follow Dr. Hartert.

The Rev. F. C. R. Jourdain sent the following note :—

In the Bulletin B. O. C. (*antea*, p. 41) Mr. P. F. Bunyard quotes Dresser's measurements and weights of the eggs of *Œnanthe œ. œnanthe*. These are said to be taken from Dr. Rey's work, 'Die Eier der Vögel Mitteleuropas,' but a reference to the original shows that by an unfortunate slip Dresser has quoted Rey's measurements of *Œnanthe isabellina* (*Saxicola saltatrix*) instead of those of *Œnanthe œnanthe*. The correct measurements of 82 eggs of *Œ. œ. œnanthe*, as given by Rey, should read av. 20·7 × 15·5 mm.; av. weight 145 mg. The 'Practical Handbook' not only contains measurements of 50 British eggs, but also those of a series of 40 eggs of *Œ. œ. leucorrhoa*. Kleinschmidt has also given measurements and weights of eggs of the latter race in his own collection. One of the most striking differences between the two races is the large size of the clutch of the Greenland birds. Clutches of 4 and 5 are obviously imperfect, for the normal clutch ranges from 7 to 9.

Mr. Gregory M. Mathews sent the following :—

Pterodroma neglus, new name for the bird described as *Procellaria lugens* in my 'Birds of Australia,' vol. ii. p. 159, 31 July, 1912, Tierra del Fuego.

Not *Procellaria lugens* Salvin, in Rowley's Miscell. vol. i. p. 235, May 1876.

Pagodroma nivea alba, new name for the bird described in my 'Birds of Lord Howe and Norfolk Island,' p. 103, pl. xxxix. 16 Oct., 1928, near Adelie Land.

In Compt. Rend. Acad. Sc. Paris, vol. xxxviii. p. 652, 3 April, 1854, Bonaparte introduced the genus *Todopsis* as follows :—

Todopsis Bp., est un nom caractéristique pour la *Muscicapa cœruleocephala* Quoy et Gaim., dont le bec si remarquable rappelle celui des Todiens.

As I cannot find this name, which is said to be given by Quoy et Gaimard, I introduce a new generic name, *Psitodos*, with type *Todus cyanocephalus* Q. et G.

Colonel Meinertzhagen sent the following correction :—

With reference to the new race of Sandgrouse described by me at the last Meeting (vol. xlix. p. 42), the subspecific name, owing to a printer's error, was spelt *vastitus*, whereas it should have been *vastitas*. The correct name of the Coronetted Sandgrouse from southern Palestine will stand therefore as *Pterocles coronatus vastitas*.

Mr. Hugh Whistler forwards the following description of a new race of Skylark :—

Galerida cristata lynesi, subsp. nov.

This form is readily distinguished from *Galerida c. magna* (Turkestan to Persia) and from *G. c. inanowi* and *G. c. vamberyi* (if they are really separable from *G. c. magna*, which I greatly doubt) by the darker and colder grey-brown tint of the upper plumage, which is quite distinct from the sandy coloration of those races. It is darker and colder in tint even than in *G. c. caucasica*, which it most nearly resembles, of the Eastern forms. The rufous wash surrounding the spotting on the breast is much paler and colder than that of the Larks of the *magna* group, approximating to that of *G. c. caucasica*, but the amount of spotting is much less than in the latter. The bill is smaller and finer than in the *magna* group, and the bird is altogether smaller.

From *G. c. chendoola* (plains of N.W. India) it is distinguished by colour alone at the first glance, being much greyer and colder in tint.

Measurements. Twelve males : bill from skull 18–20 mm. ; wing 102·5–106·5 ; tail 59–64·5 ; tarsus 22·5–24·5.

Seven females : bill 17·5–19 mm. ; wing 97·5–101 ; tail 54·5–60·5 ; tarsus 22–23·5.

Distribution. A common resident in the Gilgit Valley and in the neighbouring portions of the Indus and Hunza valleys from 4500 to 7000 feet.

Type in the British Museum. ♂. Gilgit, 20 March, 1880. J. Scully Coll. Reg. No. 97.12.10.2259.

Named in honour of Rear-Admiral Hubert Lynes, C.B.

The Editor communicated the following note on behalf of Baron Snouckaert van Schauberg :—

On p. 36 of the November 'Bulletin' Mr. H. Whistler enumerates the occurrences of the Baikal Teal in different countries of Europe. To the list may be added Holland, where this Duck has been met with on several occasions.

The first bird on record for this country is a fine male captured in a decoy in the north (prov. Groningue) on 8 March, 1909, which I received two days later. In 1913 another example, a female, was sent to me ; it had been captured about the middle of March in the province of Friesland. Both birds are now in the Leyden Museum.

In the winter of 1913 four of these birds were seen on the pond of a decoy at Hassalt (prov. Gulldre) of which a pair were captured. I have not ascertained what became of this pair.

For some subsequent years nothing more was heard of *A. formosa*, until in March 1922 a party of no fewer than twelve of these birds were noticed in a decoy on the island of Duiveland (prov. Zealand, in the S.W. of Holland). The decoy-keeper had observed the birds on two consecutive days from behind a screen, and identified them at once when a coloured plate was shown to him. He had also noticed the somewhat peculiar croaking voice of these ducks

(*glocitans* !), and that there were more drakes than ducks present. None were captured at the time. Again, on the 1st of April, 1923, three *A. formosa* visited the same decoy, and were identified by the keeper as two drakes and a duck. They soon flew away and did not return, but while there were displaying and croaking. The next year two drakes and one duck again visited the decoy about the middle of May (no exact date given) and stayed a few days. In May 1925 (about the middle of that month) five birds made their appearance, but none were captured, the season being closed.

A male was captured near Dordrecht (prov. South Holland) on 22 January, 1924, and was shown to me by Dr. Eykman of that town, who had mounted it for his collection.

From these repeated occurrences it would appear that in spring some sort of migratory movement of *A. formosa*, be it in small numbers, takes place through Holland. All the birds that have come to notice cannot possibly have been "escapes."

I may add that, according to Chevalier G. van Havre ('Les Oiseaux da la faune Belge,' 1928, p. 284), one semi-adult female was captured at La Hulpe, near Brussels, as far back as 21 November, 1888.

[After Mr. Whistler read his note on the Baikal Teal at the November Meeting, several members criticised his suggestion that the specimen exhibited was of wild rather than captive origin. Baron Snouckaert van Schauberg's interesting communication supplements Mr. Whistler's note, and to put some facts on the other side of the question before members, we have asked M. Jean Delacour, who is one of the most experienced aviculturists in Europe, for his opinion. M. Delacour writes to us as follows :—"Ever since 1907, when I bought my first lot of *Anas formosa* from Marseilles bird-dealers, I have known of many hundreds of that species to be annually imported from China, except during the War. They were, and still are, very cheap, and are sent to all parts of Europe.

"I know personally also that many are turned out on lakes and ponds in parks, unpinioned, and after the first moult it is quite impossible to tell them from genuine wild birds. In the autumn, winter, and spring, being highly migratory, most of these Teal fly away, and I know that at Cleres dozens of pure bred and hybrid ducks of all sorts, hatched on the lake there, fly away every year, and may give rise to erroneous records."—Ed.]

Errata.

Vol. xlix. p. 37, line 2, *for* record *read* regard.
p. 39, „ 22, „ tectirostris *read* rectirostris.
p. 39, „ 23, „ „ „ „
p. 40, „ 3, „ „ „ „

NOTICES.

The next Meeting of the Club will be held on Wednesday, January 9, 1929, at PAGANI'S RESTAURANT, 42–48 Great Portland Street, W. 1. The Dinner at 7 p.m.

Members intending to dine are requested to inform the Hon. Secretary, Dr. G. Carmichael Low, 86 Brook Street, Grosvenor Square, W. 1.

Members who intend to make any communication at the next Meeting of the Club are requested to give notice beforehand to the Editor, Mr. N. B. Kinnear, at the Natural History Museum, South Kensington, S.W. 7, and to give him their MSS. for publication in the 'Bulletin' not later than at the Meeting.

N.B.—As Ash Wednesday in 1929 falls upon the second Wednesday in February, the Dinner that month will take place on the following Wednesday, February 20, 1929 (Rule V.).

At this Meeting Dr. P. H. Manson Bahr, D.S.O., will give a lecture and demonstration entitled: "Ornithology as an Aid to Medical Science."

BRITISH MUSEUM (NATURAL HISTORY)
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BULLETIN

OF THE

BRITISH ORNITHOLOGISTS CLUB.

No. CCCXXIX.

The three-hundred-and-twenty-fourth Meeting of the Club was held at Pagani's Restaurant, 42–48 Great Portland Street, W. 1, on Wednesday, January 9, 1929.

Chairman: Major S. S. Flower.

Members present:—W. Shore Baily; E. C. Stuart Baker; F. J. F. Barrington; Miss Judith M. Ferrier; W. E. Glegg; Rev. J. R. Hale; B. G. Harrison; Dr. E. Hartert; R. E. Heath; Mrs. T. Hodgkin; Rev. F. C. R. Jourdain; N. B. Kinnear (*Editor*); Dr. G. Carmichael Low (*Hon. Sec. & Treas.*); N. S. Lucas; C. W. Mackworth-Praed; J. H. McNeile; G. M. Mathews; E. G. B. Meade-Waldo; J. L. Chaworth Musters; T. H. Newman; C. Oldham; C. B. Rickett; B. B. Riviere; W. L. Sclater; H. Whistler; H. F. Witherby; C. R. Wood.

Guests present:—J. P. R. Hale; W. H. Hale; R. Barton Wright.

Dr. Ernst Hartert exhibited a second specimen from Fair Isle of *Anthus gustavi* Swinhoe, the so-called Petchora Pipit. It was shot on Fair Isle by G. Stout on October 9 of last year, and it is interesting in that the collector said

it must be a Petchora Pipit before the bird was retrieved, as its note differed from the notes of all other Pipits occurring on Fair Isle. The second specimen, a male, belongs to the Royal Scottish Museum, and was sent for exhibition by Dr. Stenhouse.

[The first occurrence of this Pipit in the British Isles was in 1925, when Admiral Stenhouse obtained a male on September 24, also on Fair Isle.—Ed.]

Dr. Hartert also showed, on behalf of Lord Rothschild, a British specimen of White's Thrush, *Turdus dauma aureus* Holandre (*Turdus varius* Pallas, *Turdus whitei* Eyton). It was shot at Bury St. Edmunds, Suffolk, on December 3, 1928, by Sir Pierie Lacy, Bart., and stuffed by Rowland Ward Ltd. It is now 100 years ago since the first specimen was shot near Christchurch.

At the December meeting Dr. Hartert exhibited the only specimen in Europe of the very rare Rail which is peculiar to the Zapata swamp in Cuba. It was described by Barbour and Peters in 1927 as *Cyanolimas cervera*i, being named in honour of F. Z. Cervera, who is the only man who ever collected it. Its short and soft tail and wings suggest a very stationary bird with limited power of flight.

Mons. J. Delacour forwarded the following description of a new Laughing-Thrush :—

Trochalopterum erythrocephalum connectans, subsp. nov.

Nearest to *T. e. melanostigma*, but differs in its much purer grey, less brownish general colour of the back and underparts ; ear-coverts and sides of the neck pure silvery grey, with black shafts ; throat dark chestnut-brown, passing to brownish-grey on the lower part ; feathers of the upper breast brownish-grey, with a light grey border producing a scale-like appearance ; lower breast and abdomen uniform grey ; the whole of the back uniform dark grey ; primary coverts dark golden-green, almost black towards the tip ;

outer webs of primaries dark golden-green. Iris brown; bill black; legs and feet brown.

Measurements. Wing 98, tail 110, tarsus 36, culmen 78 mm.

Type ♂, in the Paris Museum, Phu-Ke, Xieng-Khouang (Laos). 6000 ft. 3. i. 1926. No. H.1.492.

One specimen examined.

A ♂ and a ♀ immmature, in the British Museum collection, from Loi Pangnan (S. Shan States, Salwan–Mekong Divide), collected by Thompson and Craddock in April 1902 are similar, but larger, with pure black primary coverts; the female has the brown of the throat extending lower down. Other birds from more western parts are just as grey, but lack the squamation on the breast, and gradually merge towards typical *melanostigma*.

The present form is interesting in that it connects the different northern races of *T. erythrocephalum*, with spotted breasts and black and green primary coverts, to the southern ones with uniform breasts and black primary coverts.

Mr. Hugh Whistler forwards the following note:—

Linota pygmæa Stoliczka, J. A. S. B. xxxvii. pt. ii. p. 62 (1868).

Mr. Oates, when writing the second volume of the 1st edition of the 'Fauna of India, Birds,' stated in a footnote on p. 202 that this was one of the Finches described from India which he was unable to recognise. The word India is somewhat misleading, as Stoliczka states that his new bird was based on two specimens from above Chini, 13,000 ft., and near Padam, 12,000 ft., in August and September. Consulting the original description, I find that it very clearly represents the juvenile plumage of *Metaponia pusilla* (Pallas) = *Serinus pusillus* (Pallas), which was probably not available to Mr. Oates, but which I procured in Lahul and have in my collection. *Linota pygmæa* Stoliczka will therefore stand as a synonym of *Metaponia pusilla* (Pallas).

Mr. G. M. Mathews communicated the following nomenclatorial notes:—

When working up the genus *Pomarea* from the Pacific

Islands I found that Forster described a specimen from Tongatabu in Licht. ed. Forster Descr. Anim. p. 171, 1844, and called it *Muscicapa atra*. This name he had already used on p. 170, and therefore it necessitates a new name for the bird described by Forster, ib. p. 171, from Tongatabu. It can be called

Pomarea nigra tabuensis, nom. nov.

Pomarea mendozæ (Hartlaub) has been restricted to the bird described by Forster, p. 172, from St. Christina (*cf.* Amer. Mus. Novit. no. 337, p. 2, Dec. 13, 1928).

With reference to my note on *Todopsis*, Bull. B. O. C. vol. xlix. p. 52, Gray's name of *Tchitrea cæruleocephala*, Gen. Birds, vol. i. p. 260, established this name as a pure synonym of *Todus cyanocephalus* Quoy et Gaimard, so the genus *Todopsis* stands.

Errata.

Vol. xlix. p. 52, line 21, *for* Skylark *read* Crested Lark.
„ „ „ 24, for *inanowi* read *iwanowi*.

NOTICES.

The next Meeting of the Club will be held on Wednesday, February 20, 1929, at PAGANI'S RESTAURANT, 42–48 Great Portland Street, W. 1. The Dinner at 7 p.m. Members are specially requested to note the changed date from the second to the third Wednesday of this month, Ash Wednesday falling on the 13th. (Rule V.)

Members intending to dine are requested to inform the Hon. Secretary, Dr. G. Carmichael Low, 86 Brook Street, Grosvenor Square, W. 1.

Members who intend to make any communication at the next Meeting of the Club are requested to give notice beforehand to the Editor, Mr. N. B. Kinnear, at the Natural History Museum, South Kensington, S.W. 7, and to give him their MSS. for publication in the 'Bulletin' not later than at the Meeting.

N.B.—Dr. P. H. Manson-Bahr, D.S.O., will give a lecture and demonstration entitled: "Ornithology as an Aid to Medical Science."

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BRITISH MUSEUM NATURAL HISTORY Z D

Bird Room

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BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB.

No. CCCXXX.

The three-hundred-and-twenty-fifth Meeting of the Club was held at Pagani's Restaurant, 42–48 Great Portland Street, W. 1, on Wednesday, February 20, 1929.

Chairman: Dr. P. R. Lowe.

Members present:—E .C. Stuart Baker; Miss M. G. S. Best; N. B. Coltart; Sir Percy Cox; R. H. Deane; A. H. Evans; Major S. S. Flower; W. E. Glegg; B. G. Harrison; R. E. Heath; Rev. F. C. R. Jourdain; N. B. Kinnear (*Editor*); Dr. G. Carmichael Low (*Hon. Sec. & Treas.*); C. W. Mackworth-Praed; Lt.-Col. H. A. F. Magrath; Dr. P. H. Manson-Bahr; G. M. Mathews; Col. R. Meinertzhagen; J. L. Chaworth Musters; C. Oldham; B. B. Riviere; W. L. Sclater; D. Seth-Smith; Major A. G. L. Sladen; A. Landsborough Thomson; Dr. C. B. Ticehurst; B. W. Tucker; H. Whistler; H. F. Witherby; C. R. Wood; C. de Worms.

Guests present:—Dr. Andrew Balfour; Dr. W. E. Cooke; Colonel A. E. Hamerton; M. A. C. Hinton; Professor J. W. W. Stephens.

Mr. W. L. Sclater sent the following communication :—

On the Races of *Erythropygia leucophrys*.

As a result of some critical remarks made by Mr. Chapin (*in litt.*) to me on the draft of the second part of the Systema Av. Æthiop., I have re-examined the arrangement of *Erythropygia leucophrys* and its allied races.

The representative of this group in Uganda has hitherto been identified with *E. ruficauda* described by Sharpe from Malimbe in Portuguese Congo, but comparison of the Uganda birds with Sharpe's type shows that, as suspected by Dr. van Someren (Nov. Zool. xxix. 1922, p. 237), they are distinct, and I propose to name them as follows :—

Erythropygia leucophrys vansomereni, subsp. n.

Description. Closely resembling *E. l. ruficauda*, but with the back more rufous, less brown, the rufous of the tail is also lighter and brighter, and the black subterminal spots of the tail are much shorter and more restricted.

Type. A male from Mokia, Ruwenzori, 3400 ft. Collected by R. E. Dent (Ruwenzori Expedition), 6 May, 1906. B.M. Reg. No. 1906.12.23.1220.

There are in the British Museum six examples from Mokia, 3 from Mulema (*Doggett*), 3 from Kibero on Lake Albert (*Emin*), and 2 from Lado and Yei, in the southern part of the Sudan.

The following is a list of the races which appear to be valid :—

E. leucophrys leucophrys (Vieill.). Type-locality : Gamtoos River, E. Cape Province, *ex* Levaillant.

Tail-feathers all black ; back greyish, not rufous.

Distribution. Eastern Cape Province, Natal, Zululand, and Southern Portuguese East Africa.

E. leucophrys pectoralis (A. Smith). Type-locality : " between the Orange River and Kurrichane," *i.e.*, Bechuanaland.

Tail-feathers all black, back rather more rufous.

Distribution. Bechuanaland, Transvaal, and S. Rhodesia.

E. LEUCOPHRYS MUNDA (Cab.). Type-locality : Malandje, Angola.

Central tail-feathers slightly rufous at base, markings on the breast much restricted.

Distribution. Angola and Damaraland.

Synonyms.—*E. ansoryii* O.-Grant, Bull. B. O. C. xxxiii. 1914, p. 134 : Malandje ; *E. munda ovamboensis* Neumann, J. Orn. 1920, p. 83 : Ombongo ; *E. makalaka* Neumann, ibid. : Makalakaland, founded on a bird obtained by Bradshaw probably near the Victoria Falls ; it is said to be in the British Museum, but not to be found in the collection now, is also probably a synonym.

E. LEUCOPHRYS ZAMBESIANA Sharpe. Type-locality : Tette.

Tail-feathers red with a subterminal black spot.

Distribution. Zambesi Valley, southern part of N. Rhodesia and Nyasaland, perhaps to eastern Mashonaland.

Synonym.—*Erythropygia ruficauda iubilæa* Grote, Orn. Monatsb. 1927, p. 103 : Mikandini, S. Tanganyika Territory.

E. LEUCOPHRYS RUFICAUDA Sharpe. Type-locality : Malimbe, Portuguese Congo.

Tail-feathers dark rufous with a good deal of black.

Distribution. The Congo Basin from Malimbe to the Uele.

Synonym.—*E. ruficauda saturata* Neumann, J. Orn. 1920, p. 83 : Aruwimi River, Belgian Congo.

E. LEUCOPHRYS VANSOMERENI Sclater [see above].

E. LEUCOPHRYS SOROR Reichw. Type-locality : Klein Aruscha, Tanganyika Territory.

Near *E. l. vansomereni*, but with more black on the tail.

Distribution. S. Kenya Colony and N. Tanganyika Territory from the Loita Plains to Dar-es-Salaam.

Mr. E. C. STUART BAKER forwarded the following note on *Pericrocotus peregrinus*. In Ornith. Monatsb. 1923, pp. 40, 41, Streseman points out that *P. peregrinus* Linnæus, Syst. Nat. 12th ed. p. 342, is later than *P. cinnamomeus*, p. 335,

ibid. This bird is described as being from Ceylon, but no locality is given to *P. peregrinus*, which is in a somewhat different stage of plumage; the presumption is, therefore, that both birds came from the same locality. In the 'Avifauna of British India,' 2nd ed. vol. ii. p. 329, I designated Ambala as the type-locality, but this cannot be maintained under the circumstances; *peregrinus* is obviously only a synonym of *cinnamomeus*, so that a new name is required for the Continental race of Small Minivet. I therefore name it *iredalei* after Mr. Tom Iredale, to whom I am greatly indebted for constant assistance in matters nomenclatorial.

Pericrocotus cinnamomeus iredalei, nom. nov.

Type-locality: Ambala.

The various Indian races of the Small Minivet stand as:—

(1) Pericrocotus cinnamomeus cinnamomeus.

Linn. Syst. Nat. 10th ed. i. p. 135: Ceylon.

Habitat. Ceylon, Southern India roughly south of a line drawn diagonally from Belgaum on the west to Madras City on the east.

(2) Pericrocotus cinnamomeus iredalei, nom. nov.

Habitat. North and North-West India, north of the habitat of the preceding form and excluding the habitat of those following.

(3) Pericrocotus cinnamomeus vividus.

Stuart Baker, Bull. B. O. C. xl. p. 14, 1920: Attaran River, Burma.

Habitat. Eastern Bengal and Assam, Burma, Siam, Cochin China, Yunnan, and Annam.

(4) Pericrocotus cinnamomeus pallidus.

Stuart Baker, Bull. B. O. C. xl. p. 115, 1920.

Habitat. Sind, N.W. Provinces, Mt. Aboo.

Mr. Stuart Baker also exhibited two series of Cuckoos' eggs which he had received in the Sandman Collection. The

first of those consisted entirely of blue eggs of the Cuckoo obtained in the nests of *Phœnicurus phœnicurus*, *Saxicola rubetra*, and *Œnanthe œnanthe*. The second series were all eggs of the Brambling type. The majority of these were deposited in the nests of the Brambling (*Fringilla montifringilla*) and were remarkably like the dark type of the eggs laid by that bird. This type of egg was also deposited with the eggs of *Motacilla thunbergi*, *M. alba*, *M. flava*, the Robin, Twite, Willow-Wren, and Redwing, with which they had been taken.

These two series of eggs presented examples of almost perfect adaptation, and in the exhibitor's opinion greatly strengthened his theory that the likeness between the Cuckoos' eggs and those of their hosts has been created by the slow process of elimination of the unfit, and constituted one of the most wonderful proofs of Darwin's 'Theory of Evolution by Environment.' At the same time the exhibitor quite appreciated the fact that many people would still believe that the assimilation between the Cuckoos' and fosterers' eggs could be accounted for in other ways.

Dr. C. B. Ticehurst exhibited the downy young of *Heliopais personata*, and made the following remarks :—

Up to comparatively recently the nidification of this bird was unknown. In the 'Journal of the Natural History Society of Bombay,' xxvii. p. 634 (1921), Mr. Marlow described the nest and eggs of this queer bird. Efforts were then made to induce Mr. Marlow to obtain the chick, which, of course, was also unknown, with the result that Mr. Whistler received last year a batch of six chicks taken out of eggs, and these he handed to me for description. These eggs were taken in Burma.

Description. Whole chick well-covered with down. Upper parts dark grey-brown ; dusky white over eye and on cheeks ; chin and upper throat whitish, lower throat mixed with grey-brown ; breast and belly white ; flanks grey-brown.

Note.—The large strong bill, well-marked digital claw as in other Rails, long soft downy tail (unlike the *Rallidæ*),

and the "finned" feet. The red papillomatous specialized down on the head of *Fulica atra* is not represented in *Heliopais*.

Dr. TICEHURST also forwarded the following note :—

In the 'Bulletin B. O. C.,' xlix. pp. 37–39, Mr. Stuart Baker deals with the races of *Sterna albifrons* in the Oriental region, and his results rather differ from mine made some years ago, so that I have looked into the question again with his remarks before me. In the first place, what he says about the breeding of the Lesser Tern in India being very early, so that the young should be raised ere the rains break and rivers rise, is not true of N.W. India. Here there are no rains of any moment and the rivers rise owing to the melting of the Himalayan snows, and the Terns breed about the same time as the European birds ; thus Mr. Whistler gives the dates for fresh eggs on the Punjab rivers as May 5, R. Sutlej at Phillaur, and May 25, R. Chenab at Jhang.

An examination of breeding-birds from N.W. India on the one hand and England on the other does not reveal the differences alleged. Firstly, the bill : there is no constant difference in stoutness and length—British 27·5–32·5 mm. (once 35), Indian 27·5–32 mm. (once 35) (measurement from tip of forehead-feathers). Mr. Baker does not say how he measured the bills, but 23–24 mm. for British birds is much too small if measured from forehead. Secondly, the colour of the rump and upper tail-coverts. In *albifrons* the rump and upper tail-coverts are said to be pure white ; in no single instance, however, do I find that the rump is pure white in British birds, it is either paler than the mantle or just about the same colour as the mantle ; the upper tail-coverts are white to greyish-white. Turning to N.W. Indian birds, the rump here is also just about the same colour as the mantle or paler than the mantle, and the upper tail-coverts are greyish-white to white, so that in this character, too, the European and N.W. Indian birds do not differ. Thirdly, the colour of the shafts of the primaries 1 and 2. The difference given is that the 2nd primary shaft is darker than the first

in Indian birds; but frequently is this also the case in British ones! (*cf.* 'Ibis,' 1924, p. 142).

As regards Iraq and Persian Gulf birds I find the bills measure 27–30 mm. (13 measured), and there is the same variability in the colour of the rump and upper tail-coverts and primary shafts as in British birds, hence I consider *prætermissa* a synonym of *albifrons*. Even if this Persian Gulf bird were recognizable, it should bear the prior name *innominata* Sarudny and Loudon (Orn. Monats. 1902, p. 150).

The North Indian bird was described as *gouldi* Hume, and this I consider to be a synonym of *albifrons*. What *pusilla* of Temminck is does not seem to be clear. Hume said it was unrecognizable; Howard Saunders placed it as a synonym of *sumatrana*, and Hartert as a synonym of *sinensis*.

The only adult Little Tern I have seen from Java appears to be *sinensis*.

Obs. Little Terns wherever obtained show a varying amount of grey on the upper tail-coverts and tail *when the plumage is quite fresh*, and this wears and bleaches to white or greyish-white in a month or two.

Dr. G. Carmichael Low reported that he had shot a specimen of *Anser albifrons*, the White-fronted Goose, near Langley, Slough, Bucks, on Saturday evening, February 16, 1929. The weather was intensely cold at the time. The bird was in fine condition, and by its plumage, nails, etc., it appeared to be a true wild one. He had presented it to the British Museum, and hoped to be able to show the skin at a subsequent meeting of the Club. The bird was a female. He had not had time to look up the records of the occurrence of this species in Bucks, but it certainly was very rare and was therefore worthy of putting on record.

Dr. P. H. Manson-Bahr, D.S.O., F.R.C.P., read the following paper, copiously illustrated with lantern-slides on "Ornithology as an Aid to Medical Science":—

The study of man and of the ills that may afflict him entail a habit of close observation and study, so that it has come to pass that those very attributes which go to the training

of a good field-naturalist, also attract towards the natural sciences, pre-eminently that of medicine. Therefore, almost without exception, all great medical pioneers have been close and accurate observers of nature, in which the study of birds has been no exception.

Amongst the ancients we must number that Admirable Crichton—Pliny the Elder (A.D. 23–79),—the author of 'Naturalis historia.' He should be regarded as the first systematic zoologist, and as one who, though himself not a practitioner of medicine, nevertheless contributed towards its study by his writings on "Materia medica," and also as the very first to direct attention to the scientific study of medical zoology.

The dark ages produced no outstanding medical personality till the days of Sir Thomas Browne (1605–1682)—Author and Physician,—the creator of 'Religio Medici.' Browne's interest in bird-lore was well-known and some 'Notes and Letters on the Natural History of Norfolk' were collected from his MSS. in the Sloane Collection and were edited by Thomas Southwell in 1902.

It is scarcely necessary to mention that Linnæus (1707–1778) has great claims to immortality as a systemic ornithologist, but it is hardly remembered to his credit that he was a doctor of medicine as well. Having gone through the necessary examinations for his M.D. in 1735 he defended his thesis on the causes of intermittent fever, while in the evening of his days he actually drew up a treatise on the 'Genera Morborum.'

Immortal John Hunter (1728–1793), the first physiologist and greatest surgeon, was attracted to every branch of natural science, and used a variety of birds for his dissections and experiments. Always interested in the functions of organs, he is to be remembered by ornithologists mainly for his observations on the structure of the gizzard of a seagull, which had been brought up to feed on barley, and similar phenomena in the case of other carnivorous birds fed on a vegetable diet. It was he who stimulated his pupil, the great Jenner, the inventor of vaccination (1749–1823), to make his historic

studies on the habits of the Cuckoo, for which he was awarded his Fellowship of the Royal Society in 1788.

In 1783 John Hunter wrote to Jenner, "I should be glad to have a true and particular account of the cuckoo, and as far as possible under your own eyes. To put the matter out of dispute, if the cuckoo's eggs were taken out of the hedge-sparrow's nest in which they were laid, and put into another with human hands, there could be no supposition that the parent cuckoo would feed or take care of them. I also want some young ones, I had a series from you, but a moth got in among them and plucked them."

While the peculiar nesting-habits of the Cuckoo have not been entirely robbed of their mysteries by the earlier researches of Jenner, as the perusal of the many communications which have graced the pages of our 'Bulletin' will show, it is interesting to note that Jenner employed agents to procure him necessary information which he himself was not able to obtain. In 1783, Jenner's nephew, Henry, became his apprentice. Besides attending to numberless duties of a strictly professional nature, we are told that he found in the other pursuits of his uncle many calls upon his time which he was obliged to answer. One of his duties was to pay a daily morning visit to the nests which contained young Cuckoos. This generally required a ramble from four to five miles in the neighbourhood.

During the period in which Jenner resided with John Hunter, he has employed by Sir Joseph Banks in arranging and preparing the valuable collection of zoological specimens which he had brought back from Capt. Cook's first voyage in 1771. Jenner's last paper to the Royal Society in 1823 was upon the migration of birds, a subject which had also been suggested to him by John Hunter.

The great William Macgillivray (1796–1852), Scottish naturalist, the first to attempt to classify birds on an anatomical basis in his 'History of British Birds' (1837), studied medicine at Aberdeen, but did not complete his medical course, being attracted to the structure of birds by his anatomical studies.

Joseph, Lord Lister, the great surgeon (1827–1912), was a keen observer of nature throughout all his long life, and during his retirement, in the company of his cultured wife, used to study and draw birds. His Diary with lists of birds observed is still in existence. The entries are mostly in Lady Lister's own handwriting, but we find on the 23rd of April, 1891, a page headed "Grand Bird Experience" with a sketch. His claims to distinction in ornithology need not be based on this observation, for what he deemed a "*Turdida*" is from his minute description plainly only a Whinchat!

Patrick Manson (1844–1922), the Father of Tropical Medicine, was a good field-naturalist and a keen observer of bird-life, and I shall have more to say of him later.

Though it is invidious to mention present company, I need hardly remind you that our distinguished Chairman, Dr. P. R. Lowe, is a medical man, as is also our Secretary, Dr. G. Carmichael Low.

It is in the particular field of Tropical Medicine that medicine and zoology clasp hands. It is here, as Manson reminded us, that medicine, as a science, has its living roots in Biology. His own life's work was a brilliant vindication of this connection. The corner-stone of Tropical Medicine was laid in the study of a nematode parasite of man, the *Filaria*, which was the first parasite, or germ of disease, proved to be disseminated by the agency of a flying insect—namely, the mosquito. In 1870, Timothy Lewis, a greatly distinguished officer of the Army Medical Service, discovered a small worm in the blood of natives of Calcutta, which he named *Filaria sanguinis hominis*. In 1876, Manson was working in Amoy in China, having provided himself with the most powerful microscope that he could procure, and with it he was able to prove the presence of this filaria in the blood of the local Chinese, but he went much further than Lewis and was able to show that it was merely an immature animal, an embryo in fact, an offspring of a larger worm which lived in the lymphatic vessels.

This worm was discovered by Bancroft in Brisbane in December 1876, and was named appropriately by Cobbold *Filaria bancrofti*. But the real beauty and intrinsic importance of Manson's discovery and its subsequent epoch-making interest for mankind lay in his remarkable observations upon the habits of this minute animal in the blood-stream, for he found after years of closest enquiry that the embryo filariæ disappear from the cutaneous blood at 9 or 10 o'clock in the morning and do not reappear till sunset, and that this is repeated with the greatest regularity day after day. These observations led him to formulate his "Law of Periodicity," and in it he found the clue to the secret of the life-story of the filaria worm, for he argued that these myriad embryos in the blood of man could by no means all attain maturity in the one host, for if they did so the host himself would be overpowered and completely destroyed by their numbers, so that the host and parasite would perish together. Rather, he looked upon this as the effort of the embryo parasite to escape from its host, and that the habit of *periodicity* was one which was essential to its further development *outside* the body of Man, and that in some way or other it had to be liberated from the blood of Man by an agent with *nocturnal* habits, and, as Manson's work abundantly proved, this was by the bite of the common nocturnal mosquito, *Culex fatigans*. He was much troubled in making clear in his mind the exact mechanism by which this periodicity was regulated, and this led him in the pregnant years 1875–1883 to examine the blood of other creatures for evidences of a similar infection in them. Filariæ of a similar nature were found in the blood of the white-necked Chinese (or Collared) Crow (*Corvus torquatus*), the parent forms of the worm living in the pulmonary artery were named by him *Filaria corvi torquati*. In this species of filaria he watched the process of parturition, the actual emission of the embryo filariæ by the adult female in exactly the same manner as is now known to take place in the *Filaria bancrofti* of Man. In the local Chinese Magpie

(*Pica sericea*), another new species (*Filaria picæmediæ*) was discovered. In this species the adults were found in couples in a minute tubercle, lying under one of the semilunar valves of the heart. By constantly observing these filariæ of birds in a living state under the microscope, he was able to verify what he had previously suspected in the embryo filariæ of Man, that they possessed the ability of attaching themselves to the walls of the blood-vessels, in which they lived, by a minute stylet or organ attached to the anterior extremity, and in a similar manner he was able to satisfy himself that the filariæ of Man were enabled to stabilize themselves in the smaller blood-vessels of the internal organs, especially those of the lung, when they disappeared from the cutaneous blood during the daytime hours. But, denied by public opinion of the opportunity of post-mortem examinations in Man in order to verify his hypothesis, he was again checkmated by native superstition. He found that the blood of the Magpie contained two species of filariæ, so he procured as many of these birds as possible, but here again the Chinese informed him that he must stop his work, because the Magpie is a sacred bird in China, tradition holding that many centuries ago the spirit of a defunct Emperor had entered one of them; therefore it was possible that Manson or one of his friends might shoot this particular bird! This did not absolutely deter him, but the birds themselves, which, under ordinary conditions, are remarkably tame in China, soon got to know that he was after them.

It is necessary to pursue the story of the filaria further. Manson found one day (Aug. 10th, 1877) that, if a mosquito imbibed the blood of an infected Chinaman, the embryo filariæ, escaping digestion, proceeded to develop further inside the mosquito. He observed how they escaped from the stomach and entered the muscles of the thorax, where they commenced to grow in size and bulk. Unfortunately, at this stage he was unable to trace the development further, as all his mosquitoes died on the fifth or sixth day of

feeding. For his failure to grasp the situation, as it is now known, was due to the prevailing ignorance of the life-history of the mosquito. It was believed that after one blood-feed the female mosquito laid her eggs and died, whereas, had he known that the mosquitoes feed naturally on the blood of birds, he would have been able to maintain his insects in captivity for a lengthier period without any grave difficulty. As a matter of fact, it was not till 1900 that the exact life-history of the filaria was proved by our Secretary, Dr. G. Carmichael Low, who found that, after development in the thorax, the filaria moved into the proboscis of the mosquito, where it may be traced for its entire length lying in wait for a favourable attack on the skin of the insect's prospective victim.

This wonderful and, at that time, almost incredible story was utilized in this most productive period by a process of analogy for the elucidation of the life-history of the malaria parasite, and here again the study of a similar parasite in the blood of birds gave the correct solution. The malaria parasite was discovered by a French Army Surgeon, Laveran, on Nov. 6th, 1880, and, though many surmises had been put forward regarding the probable means of its transference from the blood of one man to another, it was not till December 1894 that Manson was able to formulate his mosquito malaria theory. In this he argued on the base of his previous work on filaria, which I have just described, that the malaria parasite depended for its development outside the human body, and for its transference in nature on a particular form of mosquito, which alone, and alone only, could subserve this duty. His teaching and his discoveries on the changes undergone by the malaria parasite when removed from the blood he imparted to Ronald Ross, then a Major in the Indian Medical Service, on furlough from India. He had also studied at that time a similar parasite in the blood-corpuscles of birds, especially Java sparrows and the Indian house-sparrow, a parasite which had been discovered by Danielewski in 1885, and described further by

Grassi and Feletti in 1890, and named by them *Hæmamœba præcox*. In 1895 Ross proceeded to India in order to investigate at Manson's suggestion the possible transference of human malaria by mosquitoes. The story has often been told, and always bears retelling, of the almost insuperable difficulties which Ross overcame in his quest. How that in 1897, being foiled by religious prejudices of native Indians against his mosquito experiments, he had recourse, at Manson's reiterated instigation (as is shown by the pregnant correspondence which was conducted between these two workers during the whole period), to experiment with the parasite of birds. In 1897 and 1898 he experimented with ordinary mosquitoes (*Culex fatigans*) by feeding them on the blood of Indian Crows (*Corvus splendens*), Pigeons, Larks (*Alauda gulgula*), Bayas, Weaver-birds (probably *Ploceus baya*), and Sparrows (*Passer indicus*), all of which were found to harbour the *Hæmamœba* * (the parasite analogous to the malaria parasite) in their blood, and he was able to report on July 6th, 1898, that he had been able to trace the whole development of this parasite in the stomach of the mosquito and to identify the germinal rods, or sporozoites, in the salivary glands whence they are injected into the blood of the next victim. In this manner he was able to suggest by analogy that the malaria parasite was conveyed by the appropriate mosquito in identically the same manner—a supposition which has since been proved to be correct by Grassi, other Italian workers at that time, and by their successors. There was one lacuna in Manson and Ross's observations which has once again been filled by an observation on the blood of birds. Another species of blood parasite, *Hæmoproteus* or *Halteridium*, was found by Kruse in 1890 in the blood of pigeons. Similar species occur in the Java Sparrow (*Munia orizivora*), in House-Sparrows, Crows, and the Kestrel. It is a much larger parasite and much easier

* A complete list of many species of birds in which these blood-parasites have been found is given in Wenyon's 'Protozoology,' vol. ii. pp. 1364–1387, which has been checked by Mr. N. B. Kinnear.

to study, and it was by observations made by MacCallum in Baltimore, U.S.A., upon the behaviour of these parasites in the blood of the Crow (*Corvus americanus*), the English Sparrow (*Passer domesticus*), Red-winged Blackbirds (*Agelaius phœniceus*, and Horned Owls (*Bubo virginianus*) that gave Manson and Ross the clue which clinched their conviction of the correct life-history of the malaria parasite. It was, in fact, the discovery that the protozoon parasites have two sexual forms, a male and a female, of which the latter is fertilized by the former in the stomach of the mosquito. It was this process that was actually observed by MacCallum and communicated to Ross by Manson in his letter of 17th November, 1897. So valuable was the experimental work done on birds in the elucidation of the malaria problem that Ross was moved to write to Manson (March 21, 1898): "What an ass I have been not to follow your advice before and work with birds, technique much easier." Thus was the malaria problem, which had resisted solution for centuries, proven from the scientific aspect, but much more practical and convincing proof had to be obtained before the subject could be grasped by the public in its entirety and before official Governmental action could be based upon it. The corollary to the experiments mentioned above had to be performed:—(1) Malaria had to be conveyed under experimental conditions to man by means of an infected mosquito. (2) Malaria had to be prevented by the simple process of excluding mosquitoes from human dwellings in a malarious country. To enable him to accomplish the first of these requirements, Manson, in 1900, had some *Anopheles* mosquitoes, that had been infected with malaria parasites (Benign tertian) by Grassi and Bastianelli in Rome, brought alive to London in specially constructed cages, where they were set to bite two healthy Londoners in London—one of them, Manson's son (Patrick Thurburn Manson),—with the result that, after the due period of incubation, both victims had fever, both had benign tertian parasites in their blood, and both afterwards suffered from

characteristic relapses of fever. Here, indeed, was a sign for a perverse and foolish generation.

Secondly, and conversely, he organized the auspices of the Colonial Office, and, with the interest and approval of Mr. Joseph Chamberlain, an expedition to prove to the plain man that people who are well protected from those insects' bites can live with *Anopheles* mosquitoes in a malarious country without contracting malaria fever. This expedition, which is now history, was conducted by your Secretary, Dr. G. Carmichael Low, with Dr. L. W. Sambon and Signor Terzi. A wooden hut, constructed in England, was erected near Ostia, at the mouth of the Tiber, in the Roman Campagna, in an intensely malarious spot. The doors and windows of the hut were made mosquito-proof by wire-gauze and the occupants' beds by mosquito-nets also. Dr. Low maintained the strictest discipline and allowed his flock to wander freely about during the day-time, but shut them up in the mosquito-proof from one hour before sunset and until an hour after sunrise, the period when Anopheline mosquitoes are most active. In consequence of these measures they remained in perfect health during the whole time of their stay from July–October 19, 1900, in contrast to the local native peasantry and the unprotected doctors and attendants of the Red Cross Medical Service, who at the same time suffered severely from malaria fever. Thus did the mosquito-malaria theory emerge from the stuff that dreams are made of to the more solid basis of actual fact.

The lessons gained from a study of bird-malaria did not rest here. During the last twenty-five years considerable progress has been made in the treatment of this disease. Although quinine as a curative specific in malaria has now been known for 300 years, it has only been recently proved by the Brothers Sergent in Algiers, and confirmed by others, that quinine exerts an equally remarkably lethal action on the *Proteosoma* or the malaria-like parasite of birds. The original strain, *Proteosoma* (or *Hæmamœba*) *præcox* is obtained from wild birds, such as Bombay sparrows, and is easily inoculated into carrier-canaries, in which it produces

an acute, and sometimes fatal, infection. The difficulty has so far been to ensure the bird obtaining an appropriate dose, and this has been overcome by devising a pipette by which an adequate amount of the quinine solution can be injected directly into the gizzard of the bird without damaging it in any way. The efforts of synthetic chemists, especially in Elberfeld in Germany, have been directed recently to producing a drug more effective against malaria than quinine, and in this they have been partially successful. After a large number of experiments in which they utilized a series of over 2000 canaries, all of which had to be carefully tended and watched (involving nearly 100 assistants), Roehl has succeeded in finding one compound—Plasmoquine—which exerts a lethal action upon the proteosoma sixty times more powerful than quinine, without killing the bird at the same time. Not only does the drug completely exterminate the infection, but it also exerts the power of preventing infection when given as a prophylactic measure. Some years ago, by computing the therapeutic dose necessary for Man from that found effective for the canary, plasmoquine was tentatively given to patients suffering from malaria, both in Germany and in this country. In Man the drug was found to exert a powerful action upon certain forms of the malaria-parasite as remarkable as quinine, but it had a tendency, not observed in birds, to produce certain curious phenomena, such as a blue or chocolate coloration of the blood, the cause of which is not as yet fully understood. At any rate, it may be said that plasmoquine has its uses in the therapeutics of malaria in Man, and its synthesis has given a stimulus to chemists to attempt to produce an even more effective drug, which would convey untold blessings to mankind.

The cause of relapsing fever in Man was first discovered by Obermeier in 1873, and was found to be a slender and extremely active filament known as a spirochæte. It was soon found that similar organisms occurred in the blood-stream of cattle, sheep, horses, pigs, and various rodents. In 1891 Sakharoff discovered similar organisms in the blood of geese in the Caucasus, and it is now known that

Spirochæta anserina or *S. gallinarum* produces a fatal and relapsing-like disease in geese, ducks, guinea-fowls, turtle-doves, and sparrows in the Sudan and Central Africa, but in pigeons only a transient illness from which the bird soon recovers.

In 1907, fowl-spirochætosis was made the subject of an elaborate study by Dr. Andrew Balfour, the present Director of the London School of Hygiene and Tropical Medicine. As a result of that study, it was found that the infection was transmitted from one fowl to another by the agency of a tick, *Argas persicus*, and a considerable light was shed upon many points which were obscure in the life-history of the analogous parasite of Man, which in Africa is conveyed by a distinct variety of tick, *Ornithodorus moubata*. One striking and almost incredible fact about these spirochætal diseases is the well-accredited observation that the spirochætes, after a period of development in the body of the tick, are transmitted to the egg and thus the infection is transmitted to the next generation.

And now we come to the elucidation of a remarkable disease called Beri-beri. Beri-beri is a disease characterized by a severe nervous disorder, involving partial paralysis of the nerves—what is called, in medical language, a severe peripheral neuritis. This disease has in the past been regarded as a tropical disease confined to rice-eating populations. It is, however, now recognized that this, though the best-known example of endemic beri-beri, is only a special case of what will inevitably occur when the diet consists too exclusively of a cereal impoverished by excessive milling. This disease does not occur when unmilled rice is eaten, and it is known now that it can be cured or prevented by restoring to the polished (or milled) rice the valuable constituents (germ or embryo and pericarp, also known as silverskin), either given in the food or, in certain forms of beri-beri, injected as an extract. The discovery of a polyneuritis in birds, or avian polyneuritis, was the first important step towards the elucidation of the disease as it occurs in Man. In 1897 Eijkman, a Dutch

doctor, who was medical officer to a prison in Java, noticed that the prison poultry showed paralytic symptoms strangely reminiscent of his beri-beri patients in the adjacent gaol, and that some of them died with extreme degeneration of the peripheral nerves. The fact that these fowls were largely fed upon the rice refuse of the Institution was strongly suggestive of a dietetic origin for the disorder of the human inmates, a theory which for many years previously had attracted adherents. A careful study of *Polyneuritis gallinarum*, as the disease was called by Eijkman, was published by Grijns in 1901, but it was a matter of debate how far these experiments would explain the human disease. On further study, avian polyneuritis has been accepted as the physiological equivalent of human beri-beri. Experimental work with fowls and pigeons figures largely in the pioneer and in the later work of Vedder, Chamberlain, and Funk. It was found possible to extract the essential substance in alcohol or water from the grain, and it was proved that the substance known as Vitamin B and antineuritic factor are identical. Thus, from Eijkman's original, simple, and most pregnant observation arose the discovery of the vitamins and the vast structure that has been built upon their existence since. Vitamins have not yet been isolated in a pure state. It is thought that, though minute in quantity, they yet exert an immense influence on metabolism, that they are katalysts, and act somewhat in the same manner as certain chemicals, in so for that they themselves bring about a chemical change without being altered in the process. As a rule, they are very delicate bodies, and withstand the action of heat and chemical substances badly. They are thus altered or almost entirely destroyed in artificially preserved or canned foods. One of the most striking features of avian polyneuritis is the dramatic swiftness with which the bird will recover from almost complete helplessness. It is not unusual to see the normal gait and flight restored within a few hours after the adequate amount of vitamin (prepared from the embryo or pericarp of the grain) has been administered. A pigeon in a state of spastic paralysis may be observed a

few hours after vitamin administration standing normally erect and actually preening its feathers. The larger deposits of vitamin are preserved in the germ of the grain and in the bran, or pericarp, and in the aleurone layer. The centre of the grain itself consists almost entirely of starch. It is sometimes necessary to concentrate the factors contained in the food-stuffs in order to obtain the requisite amount of vitamin absorbed in time. An alcoholic extract is evaporated to dryness under reduced pressure. A certain form of beri-beri in children—infantile beri-beri—can be cured in the some dramatic manner as the polyneuritis of fowls by injection of Vitamin B. These children are born of perfectly healthy mothers, but, owing to an ill-directed dietary, they do not obtain the necessary amount of Vitamin B, so that, at the second or third month, they suddenly become paralysed and die. This has happened quite recently amongst the children of the Nauruans*, who have taken to eating preserved tinned foods and have given up eating coco-nuts and drinking their juice. However, it is found that actual injection under the skin of fermented coco-nut juice, or toddy, immediately checks the beri-beri process, and the child is restored in a miraculous manner to normal, in exactly the same manner as was shown in the experimental fowls with polyneuritis gallinarum mentioned above.

The nature and function of the vitamins known to science have been well told in the following lines:—

THE A, B, C OF VITAMINS.

A.

Oh fine and fat was Ralph the rat,
And his eye was a clear gold grey,
How mournful that he ate less fat,
As day succeeded day.
Till he found each cornea daily hornier,
Lacking its Vitamin A.
"I missed my Vitamin A, my dears,"
That rat was heard to say,
"And you'll find your eyes will keratinize
If you miss your Vitamin A."

* Inhabitants of Nauru Island, in the Pacific.

B.

Now polished rice is extremely nice
At a high suburban tea,
But Arbuthnot Lane remarks with pain
That it lacks all Vitamin B.
And Beri-Beri is very very
Hard on the nerves, says he.
"Oh take your Vitamin B, my dears,"
I heard that surgeon say;
"If I had'nt been fed on Standard Bread,
I shouldn't be here to-day."

C.

The Scurvy flew through the schooner's crew
As they sailed on an Arctic sea,
They were far from the land and their food was canned,
So they got no Vitamin C,
For "Devil's the use of orange juice,"
The skipper 'ad said, said he.
They were victualled on pickled pork, my dears,
Those mariners bold and free.
Yet life's but brief on the best corned beef
If you don't get Vitamin C.

D.

The epiphyses of Jemima's knees
Were a truly appalling sight;
For the Rickets strikes whom it jolly well likes
If the Vitamin D's not right.
Though its plots we foil with our cod-liver oil
Or our ultra-violet light.
So swallow your cod-liver oil, my dears,
And bonny big babies you'll be.
Though it makes you sick it's a cure for rickets
And teeming with Vitamin D.

E.

Now Vitamins D, A, B, and C
Will ensure that you're happy and strong;
But that's no use; you must reproduce
Or the race won't last for long.
So Vitamin E is the stuff for me
And its praises end my song.
We'll double the birth-rate yet, my dears,
If we all eat Vitamin E.
We can blast the hopes of Marie Stopes,
By taking it with our tea.

C. H. A.

(From 'The British Medical Journal,' vol. ?. No. 3502, Feb. 18, 1928.)

The last section of my address concerns the actual assaying of drugs, or testing their efficiency as therapeutic agents. The main drug for which birds are employed is Ergot, and I shall briefly describe the method. Ergot (*Secale cornutum*) is a fungus (*Claviceps purpurea*) growing in the grain of cereals ; the official being obtained from rye. The fungus goes through several stages of development, the resting-stage (*Sclerotium*) constituting the drug. It is used mainly to contract the uterus (by peripheral action), and thus check postpartum hæmorrhage. It also stimulates other forms of unstriped muscle, especially the intestine and blood-vessels. The consumption of grain infested with ergot leads to gangrene and spasmodic effects. Epidemics of "ergotism" were formerly frequent, and must have occurred in antiquity, although the causal connection was not recognized. The uterine effect was learned from midwives, and is first mentioned by Lonicer in 1565. When ergot preparations are administered to roosters, in about an hour the tips of the comb and wattles become blue and cold, the effect lasting several hours. It may be preceded by temporary blanching of the comb. This reaction is used for testing the quality of ergot, and is due to *ergotoxine*. The changes are due to injury of the capillary endothelium producing vascular stasis, and eventually thrombosis, analogous to frost-bite in Man. If ergot is given repeatedly to roosters, the bluing persists in the tips of the comb and wattles. Eventually these appendages undergo gangrene, and may drop off. The extremities may also be involved. Different animals vary in susceptibility ; pigs are quite susceptible, while dogs and rabbits are not. It is necessary now in order to prepare the drug satisfactorily for universal consumption to submit it to Bio-assay. For this purpose, in order to extract the ergotoxine content, the "cock's comb" test is employed, as was originally described by Lorinser in 1824 ; it is now utilized and described in the United States Pharmacopœia, and employed by all the big chemical firms who sell ergot or its derivatives.

I have endeavoured in this *résumé* to give you an outline

of a very distinctive field of bird-study, and one which, I think you will admit, has so far been productive of advances, both in the discovery and cure of disease in Man, and thus has led to the welfare of mankind in general.

Mr. C. R. Wood exhibited two clutches (each of two eggs) of *Pernis apivorus*, the eggs of one clutch being of the usual type, but one egg in the other clutch being of an unusually light variety, having no pigmentary deposit on the shell, which was of a light buff colour with slightly deeper buff blotches.

The clutch of the normal type was taken in Saxony, whilst the "variety" set was taken in Finland and until recently formed part of the Sandman collection.

NOTICES.

The next Meeting of the Club will be held on Wednesday, March 13, 1929, at PAGANI'S RESTAURANT, 42–48 Great Portland Street, W. 1. The Dinner at 7 p.m. Members are reminded that this Dinner is held conjointly with the Annual Dinner of the B. O. U., and that they are allowed to bring Lady Guests.

The Meeting will be devoted to the exhibition of Lantern Slides of various Ornithological subjects.

Members of the B. O. C. intending to dine should inform the Hon. Secretary, Dr. G. Carmichael Low, 86 Brook Street, Grosvenor Square, W. 1, and not the Secretary of the Union. This notice is necessary in order that the seating may be arranged beforehand, and failure to let the Secretary know may result in no seat being available.

The programme for the Meeting is not yet complete, and the Secretary will be pleased to hear from any Members who would like to exhibit slides.

The Subscription for 1929–30—£1 1s.—became due on October 1 last. The Treasurer hopes that those who do not pay by banker's order, or who have not already paid, will send him this without further notice.

BRITISH MUSEUM
NATURAL HISTORY
12 MAR 1928
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Bird Room
3 APR 1929
PURCHASED

BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB.

No. CCCXXXI.

The three-hundred-and-twenty-sixth Meeting of the Club was held at Pagani's Restaurant, 42–48 Great Portland Street, W. 1, on Wednesday, March 13, 1929, in conjunction with the Annual Dinner of the British Ornithologists' Union.

Mr. W. L. Sclater, the President of the B. O. U., took the Chair during the Dinner ; and Dr. P. R. Lowe, Chairman of the Club, during the subsequent proceedings.

Members of the B. O. C. present:—W. Shore Bailey ; E. C. Stuart Baker ; D. A. Bannerman ; F. J. F. Barrington ; Miss M. G. Best ; H. B. Booth ; A. W. Boyd ; A. L. Butler ; Hon. G. L. Charteris ; Sir Percy Z. Cox ; R. H. Deane ; A. Ezra ; Miss Judith M. Ferrier ; K. Fisher ; Major S. S. Flower ; W. E. Glegg ; Rev. J. R. Hale ; Col. A. S. Hamerton ; B. G. Harrison ; R. E. Heath ; G. S. Hett ; Rev. F. C. R. Jourdain ; N. B. Kinnear (*Editor*) ; Dr. G. Carmichael Low (*Hon. Sec. & Treas.*) ; N. S. Lucas ; Admiral H. Lynes ; C. M. Mackworth-Praed ; Lieut.-Col. H. A. F. Magrath ; J. H. McNeile ; G. M. Mathews ; E. G. B. Meade-Waldo ; J. L. Chaworth Musters ; T. H. Newman ; B. B. Osmaston ; C. E. Pearson ; F. R. Ratcliff ; R. H. Read ;

D. Seth-Smith; Sir Malcolm C. C. Seton; Major A. G. L. Sladen; C. G. Talbot-Ponsonby; A. L. Thomson; B. W. Tucker; Miss E. L. Turner; H. Whistler; V. O. Williams; J. Sladen Wing; H. F. Witherby; C. R. Wood; C. de Worms.

Members of the B. O. U.:—Miss J. P. Barclay-Smith; Miss R. G. Blezard; Major F. W. Borman; Mrs. V. Cranfield; J. S. Dyson; F. H. Edmondson; Miss E. M. Godman; S. H. Hart; Lord Hyde; G. C. S. Ingram; Mrs. H. M. Rait Kerr; Miss Knobel; Miss E. Leach; Mrs. F. E. Lemon; Mrs. P. McKenna; Mrs. A. H. Murton; Lieut.-Col. A. L. Owen; Lieut.-Col. W. A. Payn; A. N. T. Rankin; I. M. Thomson; Capt. L. R. Waud; T. Wells; Capt. J. A. C. Whitaker.

Guests:—Mrs. Stuart Baker; Miss C. Stuart Baker; Miss S. Stuart Baker; Mrs. D. A. Bannerman; Miss Chatterton; Lady Cox; Miss C. E. Godman; Dr. Howard; F. E. Lemon; Mrs. Carmichael Low; Miss Low; Miss Lynes; F. Pike; Mrs. Sclater; Miss Seth-Smith; Lady Malcolm Seton; Mrs. Shore-Baily; Mrs. Sladen; the Hon. Mrs. Whistler; and 37 others.

The Annual Dinner of the British Ornithologists' Union, held in conjunction with the B. O. C., was again well attended, and 131 Members and their friends were present.

The customary exhibition of photographs was opened by Mr. Stuart Baker, who showed a series of slides illustrating nests and haunts of various birds in Assam. He also gave an account of some of his adventures while in pursuit of big game in the jungles of that part of India.

The Rev. F. C. R. Jourdain exhibited some photographs taken last year in Algeria portraying the nests and nesting-places of a number of interesting birds—the Bald-headed Ibis, Common Stork, Lesser Kestrel, and Montague's Harrier.

Mr. D. Seth-Smith, whose photographs were all taken in the Zoological Gardens, showed an interesting series of slides illustrating the display of the Great Bustard, King-Penguin, Mexican Turkey, Argus Pheasant, and others. He also exhibited a photograph of the rare Rheinart's Pheasant and a male Rufous Tinamou with chicks.

Mr. W. E. Glegg showed a number of photographs of the Penduline Tit and its nest, which he had taken in the Camargue last spring. The nest was attached to the end of a light branch, which was continually in motion owing to the persistent winds, and great difficulty was experienced in obtaining clear photographs. Mr. Glegg also showed a number of slides of the nests and eggs of certain shore and water birds breeding in Essex.

Mr. G. C. S. Ingram exhibited a number of photographs taken recently by himself and Mr. H. M. Salmon in South Wales. These included a Merlin's nest among sand-dunes, a Peregrine's eyrie, and a series taken on a sheet of water near Cardiff, showing Great Crested and Black-necked Grebes, Wigeon, Teal, Mallard, and Bewick's Swans.

Mr. Hugh Whistler communicated the following description of a new race of Long-tailed Tit :—

Ægithalos caudatus aremoricus.

Differs from *A. c. europæus* (type-locality, Basel) in the more defined and broader black streaks on the head, the greater amount of black on the lower back, the narrower white edges to the tertiaries, and the darker tint of the pink on the upper surface; the lower plumage exhibits a more clearly-defined gorget of spots and a pinker tint on the throat and breast, while the breast and flanks are darker. Slightly smaller than *A. c. europæus*, wing 58·5 to 61·5 mm.

Differs from *Æ. c. roseus* in the purer white of the crown and lower parts, and from *Æ. c. taiti* (from which I cannot

distinguish *Æ. c. pyrenaicus*) in the far greater amount of white on the crown.

Æ. c. expugnatus Bacm. & Kleinschm. (E. France) appears to me to be a synonym of *Æ. c. europæus*.

Type in the British Museum. ♀, 21. x. 1928, Loudiac, Brittany (*H. Whistler Coll.* No. 7746). Reg. No. 1929.3.9.1.

Distribution. Brittany, extending up the Loire to Blois.

NOTICES.

The next Meeting of the Club will be held on Wednesday, April 10, 1929, at PAGANI'S RESTAURANT, 42–48 Great Portland Street, W. 1. The Dinner at 7 p.m.

Members intending to dine are requested to inform the Hon. Secretary, Dr. G. Carmichael Low, 86 Brook Street, Grosvenor Square, W. 1.

Members who intend to make any communication at the next Meeting of the Club are requested to give notice beforehand to the Editor, Mr. N. B. Kinnear, at the Natural History Museum, South Kensington, S.W. 7, and to give him their MSS. for publication in the 'Bulletin,' not later than at the Meeting.

Members are reminded that the Subscription for the Session 1928–1929, namely £1 1s., is now overdue. The Treasurer hopes that those who have not already paid this will do so at once without requiring to be written to individually.

In the last 'Bulletin' it was stated by mistake that this was for 1929–30: it should have read for 1928–1929.

- 3 APR 1929
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BRITISH MUSEUM
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BRITISH MUSEUM NATURAL HISTORY
21 MAY 1929
PURCHASED

BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB.

No. CCCXXXII.

The three-hundred-and-twenty-seventh Meeting of the Club was held at Pagani's Restaurant, 42–48 Great Portland Street, W. 1, on Wednesday, April 10, 1929.

Chairman: Major S. S. Flower.

Members present:—E. C. Stuart Baker; D. A. Bannerman; F. J. F. Barrington; Miss M. G. Best; A. L. Butler; R. H. Deane; Lt.-Col. A. Delmé-Radcliffe; W. E. Glegg; R. E. Heath; N. B. Kinnear (*Editor*); J. S. Lewis; Dr. G. Carmichael Low (*Hon. Sec. & Treas.*); C. W. Mackworth-Praed; Capt. W. E. F. Macmillan; Lt.-Col. H. A. F. Magrath; Dr. P. H. Manson-Bahr; G. M. Mathews; C. Oldham; C. B. Rickett; Col. R. Sparrow; Major A. G. L. Sladen; C. R. Wood; C. de Worms.

Guests present:—Miss Chawner; R. Hope.

As there were no communications or exhibits, an impromptu discussion was started on "The Effects on Bird-life of the Severe Weather in January and February."

Nearly all the Members present took part in the discussion.

The Chairman announced that Lord Rothschild had promised to exhibit his series of hybrid Ducks at the next meeting, and asked any Members who possessed hybrids to bring them.

Mr. G. L. Bates sent the following communication on a new genus of Owls:—Büttikofer (Notes Leyden Museum, xi. p. 34, 1889) described and figured an Owl from Liberia as *Bubo lettii*. Since then, this Owl has been placed in various genera by different authors. Sharpe placed it in *Scops* (= *Otus*) and Reichenow in *Lophostrix*, a South American genus. It is easy to see that it does not belong to the latter genus, and an examination of the different species of *Otus* convinces me that it cannot be placed in that genus nor any other existing genus. I therefore propose to make a new genus as follows:—

Jubula, gen. nov.

Type, *Bubo lettii* Büttikofer.

Plumage of head and neck very long and loose, forming a shaggy mane, the ear-tufts, though long, not projecting very far beyond this mane. Wings long and concave, and rounded at the tip, the outermost remex less than two-thirds as long as the longest, the following ones graduated, and the 5th or 6th primaries longest. Tail also long. Legs short; toes small and bare. Cere inflated over the nostrils, but not over the culmen, which is visible throughout its length.

Jubula is distinguished from *Bubo* in the lightness of build, small feet and weak claws, and in the thin cere which does not hide the base of the culmen.

From *Otus* it differs in thin cere, inflated only over the nostrils, and in size.

From both *Bubo* and *Otus* it is distinguished by the peculiarly long and shaggy plumage, especially about the head, in the wing very long and rounded, and in the long tail.

There are now in the British Museum nine specimens for examination, of which only one was available when Sharpe first wrote about this Owl.

Mr. Kinnear agrees with my conclusions about this Owl.

I may remark that a very miscellaneous lot of species appear to be placed in the genus *Otus*. In West Africa are two small and little-known species, *icterorhynchus* and *holerythrus*, differing from the others in colouring and in general look of plumage; they have a short outer remex (like *Glaucidium*, while typical *Otus* has the wing more like *Athene*), and the number of the rectrices is only ten!

Mr. Gregory M. Mathews described the following new Finch:—

Munia atricapilla novana, subsp. n.

This bird has the greenish throat of the Indian bird, but the deeper chestnut of the Philippine and Bornean birds, with less black on the abdomen.

Type, in the Tring Museum. An adult collected at Utingu, Cape York, North Queensland, on August 8th, 1912, by Mr. Robin Kemp.

NOTICES.

The next Meeting of the Club will be held on Wednesday, May 8, 1929, at PAGANI'S RESTAURANT, 42–48 Great Portland Street, W. 1. The Dinner at 7 p.m.

Members intending to dine are requested to inform the Hon. Secretary, Dr. G. Carmichael Low, 86 Brook Street, Grosvenor Square, W. 1.

Members who intend to make any communication at the next Meeting of the Club are requested to give notice beforehand to the Editor, Mr. N. B. Kinnear, at the Natural History Museum, South Kensington, S.W. 7, and to give him their MSS. for publication in the 'Bulletin,' not later than at the Meeting.

Members are reminded again that the Subscription for the Session 1928–1929, namely £1 1s., is now overdue. The Treasurer hopes that those who have not already paid this will do so at once, without further notice.

N.B.—Lord Rothschild has kindly promised to show a series of hybrid Ducks at the meeting on May 8. It is hoped that there will be a good attendance.

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23 MAY 1929
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BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB.

BRITISH MUSEUM NATURAL

No. CCCXXXIII.

The three-hundred-and-twenty-eighth Meeting of the Club was held at Pagani's Restaurant, 42–48 Great Portland Street, W. 1, on Wednesday, May 8, 1929.

Chairman: Dr. P. R. Lowe.

Members present:—W. Shore Baily; E. C. Stuart Baker; F. J. F. Barrington; Miss M. G. Best; Lt.-Col. A. Delmé-Radcliffe; A. H. Evans; Major S. S. Flower; A. F. Griffith; Col. A. E. Hamerton; N. B. Kinnear (*Editor*); Dr. G. Carmichael Low (*Hon. Sec. & Treas.*); N. S. Lucas; C. W. Mackworth-Praed; Lt.-Col. H. A. F. Magrath; G. M. Mathews; A. H. Meiklejohn; C. Oldham; F. R. Ratcliff; C. B. Rickett; Lord Rothschild; W. L. Sclater; D. Seth-Smith; A. Landsborough Thomson; B. W. Tucker; H. M. Wallis; V. O. Williams; H. F. Witherby; C. R. Wood; C. de Worms.

Guests present:—E. R. Dunn; Mrs. A. H. Evans.

Lord Rothschild, F.R.S., exhibited 103 skins of hybrid Ducks of 49 distinct crosses and two reverse crosses. Of these there were wild-killed examples of Mallard × Pintail;

Mallard × Teal; and Pintail × Wigeon. All the remainder had been artificially bred, mostly in Holland, but a few at Netherby Hall (Sir Richard Graham); Ditton Hall, Cambridgeshire (J. L. Bonhote); Lilford Hall (Lord Lilford); and the London Zoological Society's Gardens.

The most interesting specimen is the hybrid Carolina × Wigeon, reared by the late J. L. Bonhote at Ditton Hall, for it shows by the extraordinary elongated tail that all the Anatidæ have, lying dormant, the power of producing a tail with extremely lengthened rectrices, though only the four species of Pintail (*Dafila* auct.) and the Long-tailed Duck (*Clangula hyemalis*) have actually developed these elongated tails. Another interesting fact in connection with these hybrid ducks is that by far the greater number of the crosses are fertile *inter se*, with either parent, or with other species or hybrids.

The following is the list of the specimens exhibited :—

4 ♂ ♂, 1 ♀, Mallard (*Anas platyrhyncha* Linn.) × Pintail (*Anas acuta* Linn.). (2 ♂ ♂ wild-killed.)

2 ♂ ♂, 1 ♀, Mallard (*Anas platyrhyncha* Linn.) × Chilian Pintail (*Anas spinicauda* Vieill.).

1 ♂, 1 ♀, Mallard (*Anas platyrhyncha* Linn.) × Spotted-billed Duck (*Anas pœcilorhyncha* Forst.). (Second generation reared Ditton Hall, Cambridge, by J. L. Bonhote.)

2 ♂ ♂, 2 ♀ ♀, Mallard (*Anas platyrhyncha* Linn.) × Wigeon (*Anas penelope* Linn.).

2 ♂ ♂, 1 ♀, Mallard (*Anas platyrhyncha* Linn.) × Carolina Duck (*Lampronessa sponsa* (Linn.)).

2 ♂ ♀, 1 ♀, Mallard (*Anas platyrhyncha* Linn.) × Rosy-billed Duck (*Nyroca peposaca* (Vieill.)).

1 ♂, Ditto × Ditto. Reverse cross.

1 ♂, Mallard (*Anas platyrhyncha* Linn.) × Teal (*Anas crecca* Linn.). (Bred in London Zoological Gardens.) (= Bimaculated-Duck Pennant.)

1 ♂, Ditto × Ditto. (Shot by Captain E. A. P. Brooks, 79th Highlanders, at Bodlassan Rocks, Isle of Anglesey, January 25th, 1892.) (=Bimaculated-Duck Pennant.)

1 ♂, Mallard (domestic Call-Duck) × Rosy-billed Duck (*Nyroca peposaca* (Vieill.)).

1 ♂, Mallard (domestic) × Muscovy Duck (*Cairina moschata* (Linn.)).

1 ♂, Spotted-billed Duck (*Anas pœcilorhyncha* Forst.) × Carolina Duck (*Lampronessa sponsa* (Linn.)).

2 ♂ ♂, 1 ♀, Pintail (*Anas acuta* Linn.) × Wigeon (*Anas penelope* Linn.). (Wild-killed Holland.)

1 ♂, Ditto × Ditto. (Netherby Hall, Sir Richard Graham.)

1 ♀, Pintail (*Anas acuta* Linn.) × Chiloe Wigeon (*Anas sibilatrix* Poeppig).

1 ♂, 1 ♀, Pintail (*Anas acuta* Linn.) × Chilian Pintail (*Anas spinicauda* Vieill.).

1 ♂, Pintail (*Anas acuta* Linn.) × Teal (*Anas crecca* Linn.).

1 ♂, Pintail (*Anas acuta* Linn.) × White-eyed Duck (*Nyroca nyroca* (Güldst.)).

1 ♂, Chilian Pintail (*Anas spinicauda* Vieill.) × Bahama Duck (*Anas bahamensis* Linn.).

2 ♂ ♂, 1 ♀, Chilian Pintail (*Anas spinicauda* Vieill.) × Gadwall (*Anas strepera* Linn.).

1 ♂, Chilian Pintail (*Anas spinicauda* Vieill.) × Wigeon (*Anas penelope* Linn.).

3 ♂ ♂, Wigeon (*Anas penelope* Linn.) × Chiloe Wigeon (*Anas sibilatrix* Poeppig).

1 ♂, Wigeon (*Anas penelope* Linn.) Teal (*Anas crecca* Linn.).

1 ♂, Wigeon (*Anas penelope* Linn.) × Carolina Duck (*Lampronessa sponsa* (Linn.)). (Bred at Ditton Hall by J. L. Bonhote).

1 ♂, Wigeon (*Anas penelope* Linn.) × Chestnut-breasted Teal (*Anas castanea* Eyton).

1 ♀, Wigeon (*Anas penelope* Linn.) × Tufted Duck (*Nyroca fuligula* (Linn.)).

2 ♂ ♂, 2 ♀ ♀, American Wigeon (*Anas americana* Gm.) × Bahama Duck (*Anas bahamensis* Linn.).

1 ♂, 1 ♀, Chiloe Wigeon (*Anas sibilatrix* Poeppig) × Bahama Duck (*Anas bahamensis* Linn.).

1 ♂, Gadwall (*Anas strepera* Linn.) × Carolina Duck (*Lampronessa sponsa* (Linn.)).

1 ♂, Marbled Duck (*Anas angustirostris* Ménétr.) × White-eyed Duck (*Nyroca nyroca* (Güldst.)).

1 ♂, Bahama Duck (*Anas bahamensis* Linn.) × Carolina Duck (*Lampronessa sponsa* (Linn.)).

1 ♀, Bahama Duck (*Anas bahamensis* Linn.) × Chestnut-breasted Teal (*Anas castanea* Eyton)).

1 ♂ juv., 1 ♀, Teal (*Anas crecca* Linn.) × Formosa Teal (*Anas formosa* Georgi).

1 ♂, Chestnut-breasted Teal (*Anas castanea* (Eyton)) × Blue-winged Teal (*Anas discors* Linn.).

2 ♀ ♀, Carolina Duck (*Lampronessa sponsa* (Linn.)) × Tufted Duck (*Nyroca fuligula* (Linn.)).

2 ♂ ♂, Carolina Duck (*Lampronessa sponsa* (Linn.)) × Pochard (*Nyroca ferina* (Linn.)).

1 ♂, Carolina Duck (*Lampronessa sponsa* (Linn.)) × White-eyed Duck (*Nyroca nyroca* (Güldst.)).

1 ♂, 2 ♀ ♀, Rosy-billed Duck (*Nyroca peposaca* (Vieill.)) × Carolina Duck (*Lampronessa sponsa* (Linn.)).

1 ♂, Rosy-billed Duck (*Nyroca peposaca* (Vieill.)) × Tufted Duck (*Nyroca fuligula* (Linn.)).

1 ♂, 2 ♀ ♀, Rosy-billed Duck (*Nyroca peposaca* (Vieill.)) × Red-crested Pochard (*Netta rufina* (Pall.)).

1 ♂ juv. Rosy-billed Duck (*Nyroca peposaca* (Vieill.)) × Pochard (*Nyroca ferina* (Linn.)).

1 ♂, 1 ♀, Rosy-billed Duck (*Nyroca peposaca* (Vieill.) × Black-and-White Goose or Comb-billed Duck (*Sarcidiornis melanotus* (Penn.)).

2 ♂ ♂, 2 ♀ ♀, Red-crested Pochard (*Netta rufina* (Pall.)) × Pochard (*Nyroca ferina* (Linn.)).

2 ♂ ♂, 2 ♀ ♀, Ditto × Ditto (Reverse Cross).

1 ♂, Red-crested Pochard (*Netta rufina* (Pall.)) × White-eyed Duck (*Nyroca nyroca* (Güldst.)).

1 ♂, 1 ♀, Pochard (*Nyroca ferina* (Linn.)) × Lesser Scaup (*Nyroca affinis* (Eyton)). (Bred at Lilford Hall 1928.)

2 ♂ ♂, Sheldrake (*Tadorna tadorna* (Linn.)) × Carolina Duck (*Lampronessa sponsa* (Linn.)).

3 ♂ ♂, Sheldrake (*Tadorna tadorna* (Linn.)) × Ruddy Sheldrake (*Casarca ferruginea* (Pall.)).

2 ♂ ♂, Sheldrake (*Tadorna tadorna* (Linn.)) × Egyptian Goose (*Alopochen ægyptiaca* (Linn.)).

♂, Ruddy Sheldrake (*Casarca ferruginea* (Pall.)) × Australian Sheldrake (*Casarca tadornoides* (Jard. & Selby)).

1 ♂, 1 ♀, Ruddy Sheldrake (*Casarca ferruginea* (Pall.)) × Egyptian Goose (*Alopochen ægyptiaca* Linn.)).

1 ♂, Muscovy Duck (*Cairina moschata* (Linn.)) × Egyptian Goose (*Alopochen ægyptiaca* (Linn.)).

The 103rd skin he exhibited was that of a hybrid duck, the property of Lord Buxton, who considered it to be a hybrid between Golden-Eye × Mallard, but it is undoubtedly either a cross of Pochard × Baikal Teal or Red-crested Pochard × Baikal Teal; but he (Lord Rothschild) considered it to be the latter, as the purple sheen of the head was a peculiarity of crosses of *Netta rufina* with other ducks having metallic green on the head.

Mr. N. B. Kinnear also exhibited a number of skins of hybrid Ducks from the British Museum Collection, including the following:—

4 ♂, Mallard (*A. platyrhyncha*, ♂) × Gadwall (*A. strepera*, ♀).

2 ♂, Gadwall (*A. strepera*, ♂) × Mallard (*A. platyrhyncha*, ♀). (All bred at Netherby.)

1 ♂, Gadwall (*A. strepera*, ♂) × Mallard (*A. platyrhyncha*). (Bred in St. James's Park.)

1 ♂, Mallard (*A. platyrhyncha*) × American Black Duck (*A. rubripes*, ♀). (Bred by Sir Edward Grey.)

1 ♂, Mallard (*A. platyrhyncha*, ♂) × Bahama Duck (*A. bahamensis*, ♀). (Bred by Lord Newton.)

1 ♂, Mallard (*A. platyrhyncha*, ♂) × Pintail (*A. acuta*, ♀). (Bred by Miss Bahr.)

1 ♂, Gadwall (*A. strepera*, ♂) × Pintail (*A. acuta*, ♀). (Bred by the late J. L. Bonhote.)

1 ♂ { ♂ { ♂ Mallard (*A. platyrhyncha*) ♀ Gadwall (*A. strepera*) ♀ Gadwall (*A. strepera*). (Bred at Netherby.)

1 ♂, New Zealand Grey Duck (*A. superciliosa*, ♂) × Mallard (*A. platyrhyncha*, ♀). (Bred by Lord Lilford.)

1 ♂, New Zealand Grey Duck (*A. superciliosa*, ♂) × Chilian Pintail (*A. spinicauda*, ♀). (Bred at the Zoological Gardens.)

1 ♀, Bahama Duck (*A. bahamensis*, ♂) × Brazilian Teal (*A. brasiliensis*, ♀). (Bred by the late J. L. Bonhote.)

1 ♂, Pintail (*A. acuta*, ♂) × Wigeon (*A. penelope*, ♀). (Bred at Netherby.)

1 ♂, Pintail (*A. acuta*, ♂) × Wigeon (*A. penelope*, ♀). (Wild-killed, Loch Swilley, Donegal, E. Lort Phillips.)

1 ♂, Chilian Pintail (*A. spinicauda*, ♂) × Bahama Duck (*A. bahamensis*, ♀). (Bred by the late J. L. Bonhote.)

1 ♂, Chilian Pintail (*A. spinicauda*, ♂) × Carolina Duck (*L. sponsa*, ♀). (Bred in the Zoological Gardens.)

1 ♂, Wigeon (*A. penelope*, ♂) × Red-crested Pochard (*N. rufina*, ♀). (Bred by W. H. St. Quintin.)

1 ♂, Wigeon (*A. penelope*, ♂) × Mallard (*A. platyrhyncha*, ♀). (Bred at Netherby.)

1 ♂ { ♂ American Wigeon (*A. americana*), ♀ { ♂ Wigeon (*A. penelope*) ♀ Mallard (*A. platyrhyncha*). (Bred at Netherby.)

1 ♂, Sheldrake (*T. tadorna*, ♂) × Mallard (*A. platyrhyncha*, ♀). (Bred at Netherby.)

♂ & ♀, Muscovy Duck (*C. moschata*) × Domestic Duck (*A. platyrhyncha*). (Chili.)

1 ♀, Rosy-billed Duck (*N. peposaca*, ♂) × Pochard (*N. ferina*, ♀). (Bred in the Zoological Gardens.)

1 ♂, Rosy-billed Duck (*N. peposaca*, ♂) × Red-crested Pochard (*N. rufina*, ♀). (Bred by the late J. L. Bonhote.)

1 ♂, Tufted Duck (*N. fuligula*, ♂) × Pochard (*N. ferina*, ♀). (Tring, Lord Rothschild.)

1 ♂, White-eyed Duck (*N. nyroca*, ♂) × Tufted Duck (*N. fuligula*, ♀). (Bred in the Zoological Gardens.)

♂, Pochard (*N. ferina*) × Scaup (*N. marila*), Leadenhall Market. Purchased a few years previous to 1843 by H. Doubleday, from whose collection it passed in 1871 to that of F. Bond, by whom it was bequeathed to the British Museum in 1890. In the first edition of Yarrell's 'British Birds,' p. 247, 1843, this specimen is figured as the American Scaup.

Mr. A. F. Griffith read some notes on Shetland birds observed in Yell and Unst, mostly in June 1928 :—

My daughter and I spent from the 8th to the 16th June in Mid Yell and from that date to July 2 in Unst. With the exception of two days it was very cold, with high winds

and much rain. On the 11th there was an Arctic gale from the N.E. with heavy rain, none of the natives remembering such a gale in summer and rarely in winter. Some of our bird-notes may be interesting, especially for comparison with Buckley and Evans's 'Fauna,' published in 1899, and referred to here as the Fauna.

On June 9, 1928, we saw two Ring-Ouzels on the S.W. slope of Stany Hill, on the West Coast of Mid Yell, just above Hulk Waters. I could not see any young birds nor any trace of a nest; but it was blowing half a gale, so that the birds could scarcely bear up against it. I imagine that they must have bred there.

On June 19, 1928, I saw a Swallow at Caldbeck, Unst; on the 14th a Common Sandpiper between Vatsetter Loch (Mid Yell) and the sea; and another on the 20th and 27th in Cliff burn at Ballister, Unst. These two species seem to be as scarce now as at the date of the Fauna.

The Great Skua is now excessively abundant along the N.W. coast of Unst and common in the northern half of Yell—it is, in fact, quite a pest. On June 21, 1928, we found two Bonxies eating a newly-killed Richardson's Skua. They destroy many eggs, including even Red-throated Divers; but we saw a pair of Curlew drive off a Bonxie—no doubt, from their chicks. Of the two eggs in one of the Bonxies' nests that we found that day, one was very much more incubated than the other—I should guess a full week or more.

The 20th was one of the two fine and comparatively calm days of the month, though even that morning there was a very heavy shower without a breath of wind. We went off to the Muckle Flugga Lighthouse, off the extreme north end of Unst, afterwards going round the range of rocky islets, of which Muckle Flugga is the most northerly but one (the Out Stack). The southernmost but one of the series has a vast colony of nesting Gannets—I calculated over 1000 pairs. On my previous visit in 1920 I was told that there were nine pairs only, and that the first pairs had nested there three years previously. None nested in Shetland when the 'Fauna' was written.

The lighthouse-men told me that there is also a smaller colony on a stack inshore off Hermaness.

On the 16th we noticed a male Wheatear hovering for about two or three seconds with head to the wind ; this he did twice. I have once seen a Kingfisher do the same in Sussex, though I did not notice whether that too was head to the wind.

On the 23rd my daughter found near Culverdale, Unst, a Ring-Dotterel's nest with three eggs well hidden under big boulders.

The Common Gull is very partial to the Ghost Swift moth, the male of which flies for twenty minutes or half an hour just as the dusk comes on, about 11 o'clock (Summer Time) at night. This moth flies with a very peculiar pendulum-like flight, extending for two or three feet backwards and forwards. As soon as the flight commences the Gulls appear and fly up and down the fields and meadows frequented by the moths, making sudden darts downwards to secure them. The Gulls appear quite suddenly, and disappear just as suddenly when the flight is over, though one night I noticed one Gull remain on quartering the field, no doubt looking for the females, which continue to fly much later, but never, so far as I have noticed, with the pendulum action of the males.

The Fulmar is now one of the commonest and most widely distributed birds nesting in Shetland. In 1921 we were watching a colony of these birds in North Yell and noticed a sitting bird talking with great vivacity to its mate, which was curtseying back to it *more fulmario* (much, that is, after the manner of a pigeon). After a quarter of an hour or so of this the mate flew off, and a minute or two later the sitting bird flew off and revealed a newly-hatched chick. No doubt all the talk had been reporting and discussing the rapidly-approaching completion of the eleven weeks' vigils.

I am glad to report what appears to be the first record of the Roller in Shetland. Robbie Mouat, of Brakefield, Unst, told me that he had several times seen a blue bird at Ballister in April 1927. He is a most careful observer, and

told me that it was wont to sit on a wall near the road and fly down to the field below, returning to sit on the wall. On enquiring whether it sat upright or how, he said no, very level. A day or two afterwards Mrs. Sandison, of Houlland (*neé* Miss Saxby), told me she had seen a Jay there several times then. When I got home I sent Robbie the volumes of Bowdler Sharpe's 'British Birds,' with coloured illustrations, directing his attention to the Jay and Roller specially. He wrote, "I have been looking over those books, and I see no bird which bears any resemblance to the one I saw except the Roller, which for size and colour is the same, so it must have been a Roller. I noticed the bird had a peculiar crouching way when on the ground. I was not nearer than about 70 yards. When moving it was rather slow and had a peculiar flitting motion."

Mr. Gregory M. Mathews sent the following correction: *Chloromonarcha* Mathews, Bull. B.O.C. xlv. p. 94, March 11, 1925, is a synonym of *Monarchanax* Mathews, 'Birds of Australia,' vol. ix. part 2, April 15, 1921.

BRITISH MUSEUM NATURAL HISTORY Z 0 2
29 MAY 1929

NOTICES.

The next Meeting of the Club, the last for the Session, will be held on Wednesday, June 12, 1929, at PAGANI'S RESTAURANT, 42–48 Great Portland Street, W. 1. The Dinner at 7 p.m.

N.B.—Mr. Clifford Coles, of the Australian Ornithologists' Union, will exhibit a number of lantern-slides of Australian birds and their nests.

Members intending to dine are requested to inform the Hon. Secretary, Dr. G. Carmichael Low, 86 Brook Street, Grosvenor Square, W. 1.

Members who intend to make any communication at the next Meeting of the Club are requested to give notice beforehand to the Editor, Mr. N. B. Kinnear, at the Natural History Museum, South Kensington, S.W. 7, and to give him their MSS. for publication in the 'Bulletin,' not later than at the Meeting.

Bird Room.

PURCHASED

BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB.

No. CCCXXXIV.

The three-hundred-and-twenty-ninth Meeting of the Club was held at Pagani's Restaurant, 42–48 Great Portland Street, W. 1, on Wednesday, June 12, 1929.

Chairman: Dr. P. R. Lowe.

Members present:—Sir Percy Cox; J. Cunningham; Lt.-Col. A. Delmé-Radcliffe; Major S. S. Flower; W. E. Glegg; G. H. Gurney; Col. A. E. Hamerton; Dr. E. Hartert; Rev. F. C. R. Jourdain; N. B. Kinnear (*Editor*); Dr. G. Carmichael Low (*Hon. Sec. & Treas.*); N. S. Lucas; Captain W. E. F. Macmillan; Lt.-Col. H. A. F. Magrath; T. H. Newman; C. Oldham; G. H. R. Pye-Smith; C. B. Rickett; W. L. Sclater; H. Whistler; C. R. Wood; C. de Worms.

Guests present:—C. Coles; W. S. Flower; Miss E. J. Delmé-Radcliffe; E. F. Pollock.

Before commencing the business of the Meeting, the Chairman referred to the great loss the Club had sustained in the death of Mr. H. C. Robinson on May 30.

Ever since his retirement in 1926 from his post of Director of the Federated Malay States Museums, Mr. Robinson had been a regular attendant at the meetings of the Club.

On the motion of Sir Percy Cox and seconded by Mr. W. L. Sclater, it was agreed to send a letter of condolence to Mr. Robinson's sister.

Dr. G. Carmichael Low exhibited the skin of a Black-tailed Godwit (*Limosa limosa*), which had been sent to him by Mr. William Towers, Secretary to the Orkney Natural History Society, Stromness. The bird was obtained by Mr. Marwick, of Stromness, who sent the following note about it to Mr. Towers :—

"Black-tailed Godwit, picked up dead on Feval Farm, Tenston, Sandwick, on Tuesday, June 4, 1929. Not recorded authoritatively in Orkney before, so far as I know."

The bird, apparently an adult, is in summer plumage and appears to be in quite good condition. The species has previously been recorded from Orkney, but for some unknown reason is very rare there. Dunbar states (Ann. Scott. Nat. iv. 1895, p. 56) that a specimen was shot on the Island of Westray, Orkney, September 27, 1894, and he believes this to be the first record from there on satisfactory evidence. Why the bird should be so rare is unknown. Summer remaining birds are probably pricked ones, that have not the strength to find their way north to their usual breeding-haunts.

The Rev. F. C. R. Jourdain remarked that it was strange that the Black-tailed Godwit should occur so rarely in the Orkneys, as one would expect to meet with it there on passage to and from its breeding-places in south-west Iceland. An egg, ascribed to this series and purporting to come from the Orkneys, was selected under the Crowley Bequest for the British Museum, but is in reality only a variety of that of the Lapwing. The Black-tailed Godwit has, however, been met with previously in the Orkneys, and the late Mr. W. R. O.-Grant made a statement to this effect at the B. O. C., about the year 1913, but apparently no record was inserted in the 'Bulletin.' Mr. E. G. B. Meade-Waldo, however, informs

me that he was with Mr. Grant when they saw two Black-tailed Godwits near Loch Sanday, in June 1912, and they also saw one in the following year, but the watcher was unable to give any further information as to their presence, and none were seen by Mr. Meade-Waldo in 1914.

Exhibition of Slides of Australian Birds.

Mr. Clifford Coles, of the Royal Australian Ornithologists' Union, exhibited a number of lantern-slides of Australian birds and their nests. These photographs were the work of Messrs. Burrell, Cannon, Caley, Chaffer, Chisholm, Coles, Gaukrodger, Hindwood, Innes, A. S. de Söuef, Ramsay, Webb, and the late F. Morse, all members of the Royal Zoological Society of New South Wales, and had been specially got together for Mr. Coles to exhibit before the British Ornithologists' Club.

A number of the photographs were taken in the National Park, and a slide was shown of the bungalow in the park, where members of the Society can stay and study the fauna of the district.

The Nankeen Night-Heron (*Nycticorax caledonicus*) was recently found breeding in a large colony on Snapper Is., Port Stevens, N.S. Wales, and a picture was exhibited of part of the island with a number of the birds on the tree-tops.

Among the sea-birds Mr. Coles showed photographs of the Wedge-tailed Shearwater (*Puffinus pacificus*) and its burrows, taken on the Capricorn group ; Brown Gannets (*Sula sula*), in various stages of development, on Fairfax Is.; young Pelicans (*P. conspicillatus*) and white-capped Noddies (*Anous minutus*) with nests and young on a Pisonia-tree—200 nests were counted on one tree which was not more than 60 feet in height.

Of Waders, there were slides of the Banded Plover (*Zonifer tricolor*) and three different species of Dotterel, both eggs and birds.

Mr. Coles remarked that during a drought Cranes (*Megalornis rubricundus*) frequent stations for the sake of food and

water, and in a photograph he showed several of these large birds stalking about among some poultry.

An interesting series of slides included the adult, eggs, and young of the Tawny Frogmouth (*Podargus strigoides*), also a flash-light photograph of an old bird feeding its young.

Many Kingfishers in Australia nest in holes made in the mounds or nests of Termites or White Ants, and Mr. Coles had photographs of the common Laughing Kingfisher, locally known as the Kookaburra (*Dacelo gigas*), the Sacred Kingfisher (*Halcyon sanctus*), the Red-backed Kingfisher (*H. pyrrhopygius*) at their nests.

Flycatchers were represented, among others, by slides of Australian Robins (*Petroica*), the Flame- and Red-capped, and a delightful picture of a female Fantail Flycatcher (*R. rufifrons*) with tail outspread on its nest.

Of Shrikes, there were photographs of the two Whistlers (*Pachycephala*), the Golden and Rufous, Coach-whip Bird (*Psophodes olivaceus*), and Black-faced Cuckoo-Shrike (*C. novæ-hollandiæ*) with nest, eggs, and young in various stages of development.

A beautiful photograph of a superb Blue Wren—one of Australia's ornithological gems—was much admired. Mr. Coles had an interesting observation on a pair of these birds, which he had kept in his aviary at Roseville for several years, and had noted that they moulted twice annually for three years in succession—in February and July, two weeks being occupied in making the complete change.

Tree-Creepers in Australia are very different in appearance to the well-known bird in this country, although they belong to the same family, as could be seen in the pictures of the White-throated and Brown Tree-Creepers (*Climacteris leucophæus* and *picumnus*).

The curious little birds, the Pardalotes, which belong to the family Dicæidæ, and make their nests in holes tunnelled in a mudbank, were represented by photographs of the Red-tipped Pardalote (*Pardalotus ornatus*) and the Spotted Pardalote (*P. punctatus*) outside their nesting-places.

Mr. Coles remarked that the Silver-Eye (*Zosterops lateralis*) is one of the most useful birds in a garden on account of the quantities of aphides etc. it devours. At times, however, it likes a change of diet, and one was shown with its head buried in a fig.

The Honey-eaters, or Meliphagidæ, are very numerous in Australia, and slides were shown of a number, including Lewin's, or the Yellow-eared Honey-eater (*Meliphaga lewini*), of which Mr. Coles remarked: "This bird builds in the outer foliage of thickly-leaved trees in gullies. It was named after Lewin, an English ornithologist, who published a work on Australian birds in 1822.

"Instead of using dry leaves for the bottom of the nest, the particular bird in the photograph has secured small pieces of paper, on one of which appears the printed word 'nest'!"

Three interesting pictures depicted the mud nest, with eggs, young, and parents feeding the young, of the Apostle-Bird (*Struthidea cinerea*). This bird belongs to the Corvidæ, and of other members of the family Mr. Coles had photographs of the Australian Raven (*Corvus coronoides*) and the White-winged Chough (*Corcorax melanorhamphus*).

The name "Magpie" in Australia is used for birds belonging to the subfamily Gymnorhinæ, of which one of the best known is the Grey-billed Magpie (*Strepera versicolor*), whose habits are very similar to those of Crows and Magpies.

The Pied Butcher-Bird (*Cracticus nigrogularis*), of the same family, was shown in a series of slides exhibiting the nest and four eggs, nestlings, and young birds ready to leave the nest. One photograph was of four birds in attendance on a nest of young, two of which were in mature black-and-white plumage and two in the sub-adult grey plumage. The two latter, Mr. Coles said, did most of the feeding and clearing of the nest.

Excellent slides showed the Satin Bower-Bird (*Ptilonorhynchus violaceus*) at its bower with a stick in its bill; and

the Spotted Bower-Bird (*Chlamydera maculata*) alongside its bower.

The final photographs, though not dealing with birds, were of very great zoological interest, and were pictures of that most remarkable egg-laying Australian mammal, the Duck-billed Platypus (*Ornithorhynchus anatinus*). In this series were included slides of the nest and eggs, young in nest, and a photograph of Mr. Harry Burrell, who has done so much to elucidate the life-history of this animal, with two adults.

At the conclusion of Mr. Coles's remarks, Dr. Lowe thanked him for the very interesting exhibition he had shown, and also asked him to convey the thanks of the Club to the members of the Royal Zoological Society of New South Wales for sending these slides.

Mr. David Bannerman forwarded the following remarks on the races of the Harlequin-Quail and named a new form. He writes :—

In working through the specimens of the Harlequin-Quail (*Coturnix delegorguei*) it became obvious that three races must be recognised instead of the single species named by Delegorgue after himself. In addition to the typical species, described from the Upper Limpopo river which ranges over a great part of the African Continent from the Sudan to the Cape, there are two obvious subspecies. One is restricted apparently to the island of São Thomé in the Gulf of Guinea, distinguished easily by its darker colouring in both males and females from mainland birds. For this race we already have a name, *Coturnix histrionica* Hartlaub [Rev. Mag. Zool. 1849, p. 495 : where the São Thomé island bird is fully described and named, not because Hartlaub considered it distinct from Delegorgue's Quail, but because he did not believe the original description of *C. delegorguei* to be sufficiently accurate]. The type of *C. d. histrionica* is in Hamburg. The male is figured : Verz. Hamburg, 1850, pl. xi. The third race is that which occurs in Southern Arabia, and of which we have four specimens in the British

Museum collection from Lahej and the Aden Peninsula. It is distinguished by its much paler brown coloration (almost resembling the colouring of *C. coturnix coturnix* in tone) as we might expect of a bird inhabiting that arid land. There does not appear to be a name available for the Arabian Harlequin-Quail, so I propose to distinguish it as

Coturnix delegorguei arabica, subsp. nov.

Type in the British Museum [♂], Lahej, S. Arabia 11.3.95. Col. Yerbury, Collector. Brit. Mus. Reg. No. 95. 5. 13. 21.

♂, bill (from rear of nostril) 10, wing 95–97 (type 98), tail 28, tarsus 25 mm.; ♀, wing 95 mm.

(3 ♂, 1 ♀ examined.)

Attention had already been drawn to the races by Messrs. Sclater and Mackworth-Praed in 'The Ibis,' 1920, p. 841; but in the senior author's review of the races in 'Systema Avium' (1924) only one race was recognized. I presume, therefore, that he did not consider it advisable to recognize more than one form, a course with which I cannot agree.

Mr. N. B. Kinnear sent the following note:—

Mr. E. C. Stuart Baker has kindly drawn my attention that the name for the Mt. Victoria Tree-Creeper, *Certhia familiaris intermedia* Kinnear (Bull. B. O. C. xli. p. 139, 1921), is pre-occupied by *Certhia intermedia* Muller (Nat. Syst. Suppl. p. 98, 1776), and I therefore propose in its place

Certhia familiaris ripponi, nom. nov.

Lord Rothschild and Ernst Hartert sent the following note:—

When describing *Manucodia ater altera** (Nov. Zool. x. p. 84) we only separated the two obvious races, *i. e.*, the much

* This should really have been *M. ater alter*. *Manucodia* is the "Latin" rendering of the native name "Manok deva," meaning the bird of the gods, and there is no reason why that name should be in the feminine gender.

smaller form inhabiting Dutch New Guinea, with Waigiu and Batanta, ranging south to the Snow Mountains, and along northern New Guinea to the Mandated Territory. The type of the larger subspecies was from Sudest Island in the Louisiade group, and with it we united the birds from the Aru Islands and south-eastern New Guinea. With more material at hand we find it necessary to make a further subdivision, viz., we propose to restrict the name *alter* to the birds from Sudest Island, and to give a new name to the form from the Aru Islands, which stretches along the Fly River plains to S.E. New Guinea.

These birds differ from *M. ater alter* in having in the series a smaller bill (though single specimens may not always be separable), and males must be compared with males, females with females, and in the abdomen being more greenish, less purplish blue. There seems to be no constant difference in the length of the wings. We call this form

Manucodia ater subalter.

Type in the Tring Museum, ♂. Dobbo, Aru Islands, 31. xi. 1897, collected by Heinrich Kühn.

We have thus the following subspecies of *M. ater* :—

M. ater ater (Less.), Dutch New Guinea, from the Arfak Peninsula to the foot of the Snow Mountains, along northern Papua to the Mandated Territory, Type: Dorey (Arfak).

M. ater alter Rothsch. & Hart., Sudest Island, Louisiade Group. Type: Sudest Island.

M. ater subalter R. & H., Aru Islands and southern New Guinea to S.E. Papua, Islands of Sariba and Yule. Type: Dobbo, Aru Islands.

NOTICES.

The next Meeting of the Club, will be held on Wednesday, October 9, 1929, at PAGANI'S RESTAURANT, 42–48 Great Portland Street, W. 1. The Dinner at 7 p.m.

Members intending to dine are requested to inform the Hon. Secretary, Dr. G. Carmichael Low, 86 Brook Street, Grosvenor Square, W. 1.

ANNUAL GENERAL MEETING.

This will also be held at PAGANI'S RESTAURANT on Wednesday, October 9, 1929, at 5.45 p.m. An agenda and balance sheet will be issued in September.

Members who intend to make any communication at the next Meeting of the Club are requested to give notice beforehand to the Editor, Mr. N. B. Kinnear, at the Natural History Museum, South Kensington, S.W. 7, and to give him their MSS. for publication in the 'Bulletin,' not later than at the Meeting.

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PRINTED BY TAYLOR AND FRANCIS, RED LION COURT, FLEET STREET.